

South Carolina Drycleaning Restoration Trust Fund

Program Status Report December 15, 2005



South Carolina Department of Health and Environmental Control
Federal and Drycleaning Remediation Section
Bureau of Land and Waste Management

About This Report

The South Carolina Department of Health and Environmental Control (DHEC) has administered the South Carolina Drycleaning Restoration Trust Fund (the Fund) for 10 years. Pursuant to the South Carolina Drycleaning Restoration Trust Fund Act of 2004 (the Act), this is the second report on the status of the Fund and its accompanying environmental clean-up activities. The first status report, dated December 15, 2004, contained background information on common drycleaning-related environmental contamination problems and innovative clean-up technologies used at drycleaning sites. The 2004 report also contained summaries of the assessment and remediation details at each drycleaning site where Fund monies had been spent and provided summary monetary details of the Fund through the Fall of 2004. Copies of the 2004 report are available from our office (contact information below) or on the Internet at

http://www.scdhec.gov/lwm/forms/program_status_2004.pdf

This second annual (2005) status report updates the assessment and remediation activities that have taken place on individual drycleaning sites and provides an updated snapshot of the Fund status. This report is intended to reach a wide variety of audiences, including the Drycleaning community, particularly participating drycleaners of the Fund; the South Carolina General Assembly and other elected officials; financial and real estate professionals; consultants; businesses; local governments; and the general public.

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Submitted 12/15/05

A Message from the Director

The past year has seen many exciting changes in the South Carolina Drycleaning Restoration Trust Fund program, including much-needed additions to the funds available for environmental clean-up, an accompanying increase in the amount of work accomplished, and an increase in the number of drycleaners participating in the program. During the 2004 South Carolina legislative session, the General Assembly added a 1% environmental surcharge on drycleaning to augment the revenue source to the Fund. This change has effectively doubled the amount of money available to perform the environmental assessment and remediation activities on which the drycleaning program is based. We at DHEC are proud of what has been accomplished in the past year regarding discovering and cleaning up drycleaning-related contamination around the state. Active remediation is taking place at four sites, including three sites that are employing the innovative use of underground ozone injection to remediate contaminated groundwater. Potassium permanganate, a salt-like material, is being injected into the groundwater to clean up contamination at the fourth site. Clean-up has been completed at four other sites with health impacts brought below applicable state and federal levels. Details of the past year's clean-up activities are presented site-by-site in Section 5.

As outlined in the Five-Year Funding Projection (Section 2), we anticipate an even more aggressive schedule in 2006. In addition to levying the new 1% surcharge, which provides funding for the work, the 2004 legislative changes also gave non-participating drycleaners a new opportunity to participate in the Fund. As a result of this new opportunity, we have received many more applications from drycleaners who are paying into the Fund and who want to realize the benefits of the Fund. We are currently in the process of receiving and evaluating these applications and will soon begin ranking them relative to the approximately 300 sites already in the prioritization database. Further information on the prioritization process is available in Section 4, and the currently-ranked sites are listed by county in Section 6. Once we complete prioritization of the new sites, we will re-evaluate our priority list and initiate assessment activities on the newly-added high priority sites. We therefore expect 2006 to be even busier than last year, and we are looking forward to accomplishing a great deal in the coming months.

I hope that you find this report on the Fund informative and interesting to read. We welcome your inquiries and participation for the successful implementation of this program.

J. Keith Lindler, P.E., Director
Division of Site Assessment and Remediation
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control

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1. Introduction

In 1995, the South Carolina General Assembly created the Fund to address environmental contamination resulting from drycleaning activities in South Carolina. The Fund was formed at the urging of the drycleaning industry to protect small drycleaners from the potentially devastating financial responsibility of environmental problems at their facilities. Many of these problems date back numerous years and have resulted from operational and disposal practices that were common before the industry was environmentally regulated. Since small businesses rarely have the financial capital to deal with such issues, problems of contamination were often not addressed.

Several hundred drycleaners initially joined the Fund, but not every drycleaner in South Carolina participated. Drycleaners who used petroleum-based solvents were given a one-time opportunity in 1995 to opt-out of the Fund. These businesses are not required to pay the annual fees or solvent taxes paid by participating drycleaners, but by not participating, they are also not allowed to reap the benefits of the Fund if contamination is ever discovered on their property. Over the years, some of these original “opt-outs” have since chosen to participate in the Fund.

When the Fund was created, it was known that contamination would likely be found, but the extent of the problem has proven to be larger than initially understood. Since field investigations of the highest priority drycleaning sites began, contamination plumes have been found in groundwater at drycleaners across South Carolina. In addition, public and private water supply systems as well as some streams and other surface water bodies have been affected by contamination. In short, drycleaning-related environmental contamination has been found on almost every site investigated to date.



A newer-model dry-to-dry machine with built-in containment. These higher-efficiency machines release only small amounts of solvent to the environment.

There are several reasons for the ubiquity of solvents around drycleaning facilities. The most commonly used drycleaning solvents, perchloroethylene (PCE, or “perc,” an industrial chemical) and various compounds derived from petroleum, easily penetrate many materials, including the concrete floors common at drycleaning plants. Most older drycleaning machines, which require solvent-laden clothes to be transferred from the machine to a dryer, were the source of much solvent release to the environment. Regulations now require that the floors in drycleaning plants be sealed with epoxy paint or other impermeable surface. Newer drycleaning machines, pictured above, are designed to both wash and dry clothes in the same cycle, avoiding drips and spills during transfer of clothes between machines.

Other releases came from waste by-products created by the filtering and distillation processes necessary for re-use of solvent in the drycleaning plant. These wastes contain small amounts of solvent and are now collected by hazardous waste disposal companies. Before the disposal companies began operating in the late 1980’s, the wastes were commonly discarded directly onto the ground, into the sewer system, or into leaky dumpsters. Also, since older drycleaning machines vent solvent vapors to the outside, solvents would condense in cool weather and collect in nearby soil.

A spotting station, used for removal of stubborn stains with concentrated PCE prior to drycleaning. Release of PCE from this type of station is another potential route for drycleaning solvents to enter the environment.



Since the solvents do not break down quickly in the environment, small releases can eventually accumulate into a significant source of contamination under the drycleaning plant. Solvent trapped in the soil beneath a drycleaning facility can be a continuing source of groundwater and surface contamination for many years. As a result, a drycleaning plant may be an ongoing source of contamination long after it has stopped operating or has implemented containment measures to prevent further releases.

Of course, since the Fund is limited in size, it can not immediately address the environmental problems at every participating site. Two primary mechanisms have been implemented to ensure the sites that present the most significant health impacts are addressed first and that there is enough money in the Fund to continue the work into the future. The first mechanism is a priority list (further details in Section 4), based on health impacts, that is created from detailed information gathered on each participating drycleaning site. The second mechanism was implemented in 2004 when the South Carolina General Assembly amended the Act to provide for additional money to come into the Fund. These additional sources of funds come from the 1% environmental surcharge on drycleaning sales and from annual fees on new or delinquent drycleaners that are required to participate in the Fund.

One of the most positive program outcomes is the enhancement of environmentally sustainable business practices by participating drycleaners. The Act requires participating drycleaning operators to certify to DHEC that they are handling their drycleaning solvents in an environmentally responsible manner. As a result, drycleaners participating in the Fund have maintained or implemented containment measures that do not allow solvents to be released to the soil or groundwater. While this will not remove contamination that has already been released into the environment, these measures will greatly reduce the probability of future releases and will help make South Carolina a cleaner place to live.



Contained waste storage behind a drycleaning facility.

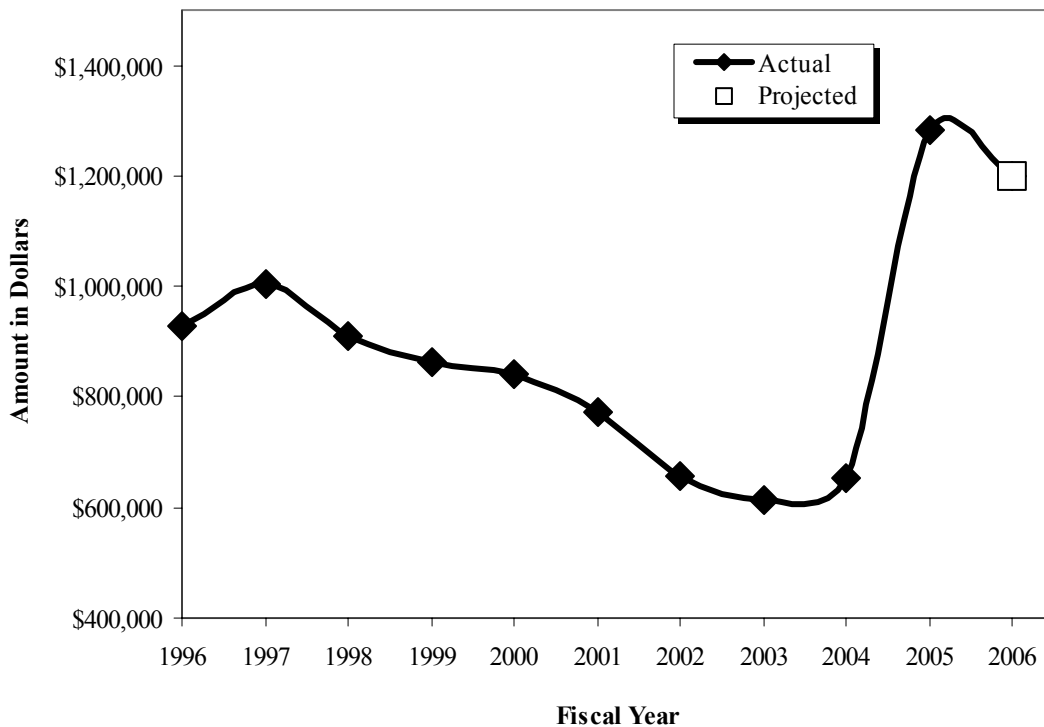
2. Fund Status and Five-Year Funding Projection

Funding Source

The South Carolina Department of Health and Environmental Control (DHEC) is responsible for administering the South Carolina Drycleaning Restoration Trust Fund (the Fund). The South Carolina Department of Revenue (DOR) is responsible for drycleaner registration and collection of money into the Fund.

Revenue for the Fund has historically been derived from two sources: 1) Registered facilities pay yearly fees into the Fund based on their number of employees; and 2) A surcharge is assessed on every gallon of drycleaning solvent purchased for use in the state. The annual fees are assessed on a sliding scale that depends on the number of employees at each drycleaning business. Surcharges are not collected from drycleaners that registered with DOR as opting out of the Fund.

As a result of declining revenues to the Fund (Figure 1), a legislative change enacted in May 2004 added a 1% sales tax on drycleaning as a third source of revenue. Imposition of the 1% tax began on July 1, 2004 (Fiscal Year 2005, FY05). With the addition of the 1% tax, revenue into the Fund increased from \$655,000 in FY04 to \$1,284,000 in FY05.



**Figure 1: Drycleaning Restoration Trust Fund Yearly Income
(actual dollar amounts in Table 1)**

The historical total income into the Fund through July 1, 2005 is \$8,531,000, and historical total expenditures through July 1, 2005 have been \$7,240,000 (Figure 2). For the first three years, the only expenses to the Fund were minor amounts necessary to cover DHEC's expenses while regulations and procedures were developed. Expenses increased slightly over the next two years as a limited amount of fieldwork was conducted to obtain information necessary to prioritize the large number of sites that had applied to become eligible for the Fund. By FY01, expenditures started increasing as assessment activities began on several sites and remediation systems were implemented. By early FY04, the Fund balance had dropped to a point that work had to be suspended on most sites. With the addition of the sales tax as a revenue source, DHEC has begun assessing and remediating sites once again.

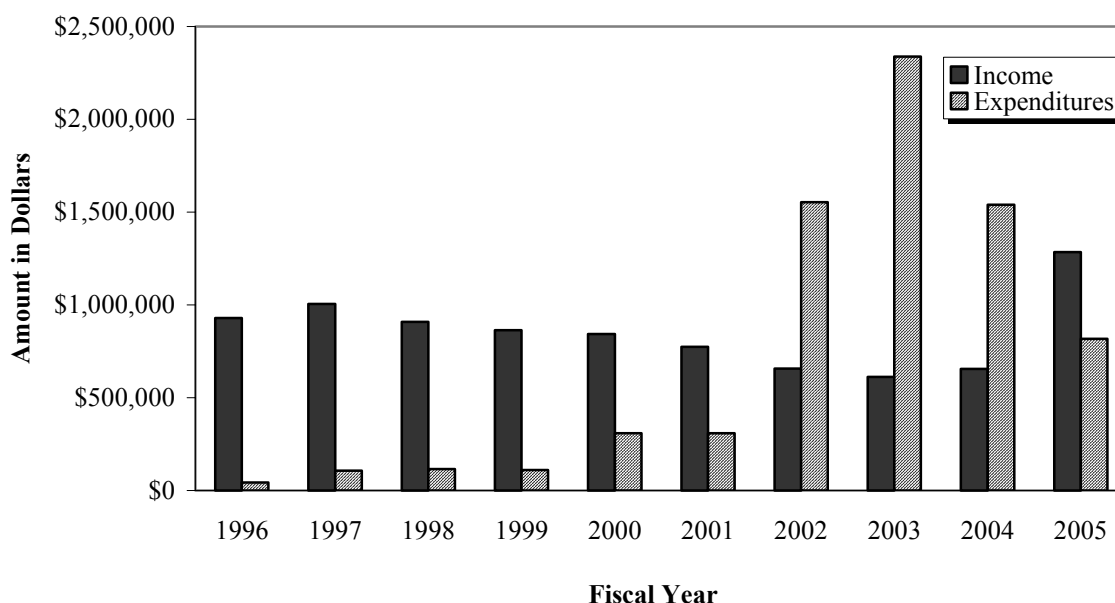


Figure 2: Yearly Comparison of Income versus Expenditures
(actual dollar amounts in Table 1)

Funding needs

There are 272 drycleaning plants that have registered into the Fund as of July 1, 2005. Not all of these plants are still operating. In addition, there are 182 former drycleaning plants that stopped operating prior to 1995 (when the original legislation was enacted) that are also eligible for the Fund. Altogether, there are 454 known drycleaning sites that may use Fund monies plus an unknown number of sites that can still register and become eligible for assessment and remediation funding.

It is estimated that \$147 million will be required over the lifetime of the Fund to assess and clean up eligible sites. This amount may be considerably under-estimated because it is based on assumptions that future sites will not require the level of funding expended thus far and has not been adjusted for inflation. The actual amount may be higher by the

time all drycleaning sites are cleaned up. This figure includes estimates of \$59 million for assessment costs and \$88 million for remediation costs including funds needed for long-term operations and maintenance of remedies installed at drycleaning plants.

Assessment Costs

Assessment costs are incurred during activities to delineate the nature and extent of contamination. A large portion of the assessment costs at drycleaning plants is due to the expense of investigating groundwater contamination. To date, completed assessments at drycleaning sites have costs ranging between \$51,000 and \$477,000. The average cost of assessing each site is \$182,000. It is anticipated that the average cost will drop at least 10% due to increased efficiencies of the program as experience is gained with more sites. It is also assumed that some lower priority sites will be less expensive to evaluate because it is probable that the contamination will be less extensive than has been found at the higher priority sites.

Assuming the average assessment cost can be decreased to \$161,000, it will require at least \$59 million for assessment costs to investigate the sites.



One of the most common field assessment methods is the Color-Tec screening procedure. During the initial phases of assessment, water or soil from the site is collected into a small vial and heated. The air in the vial is then tested for the presence of hydrocarbon compounds. Such real-time assessment in the field allows for faster and more economical delineation of a contaminant plume.

Remediation Costs

Once the sites are investigated, they usually require some type of remedy in order to meet the clean-up standards. Of the sites investigated to date, approximately 75% will require a full remediation system. Even if a full remediation system is not needed because the levels of contamination are below clean-up standards, approximately 20% of the sites will likely require a few years of monitoring to verify that the contamination has stabilized or is decreasing. It is likely that less than 5% of all sites investigated will not need any follow-up expenditure for either remediation or long-term monitoring.

The costs of the installed remedial systems have averaged \$457,000 per site, including all costs of installation and the projected costs of operation and maintenance (O&M) for the number of years that will be required until the clean-up goals are met.

For cost estimating purposes it is assumed that 75% of the sites will need a full remedy. It is also assumed that the average cost of remediation can be reduced 30% (to \$320,000) because lower priority sites should not have the same extent of contamination as the higher-priority sites. Most of the remaining sites will require monitoring to ensure the contamination is adequately addressed. Based on these assumptions, \$86 million will be needed for remediation costs over the lifetime of the Fund.



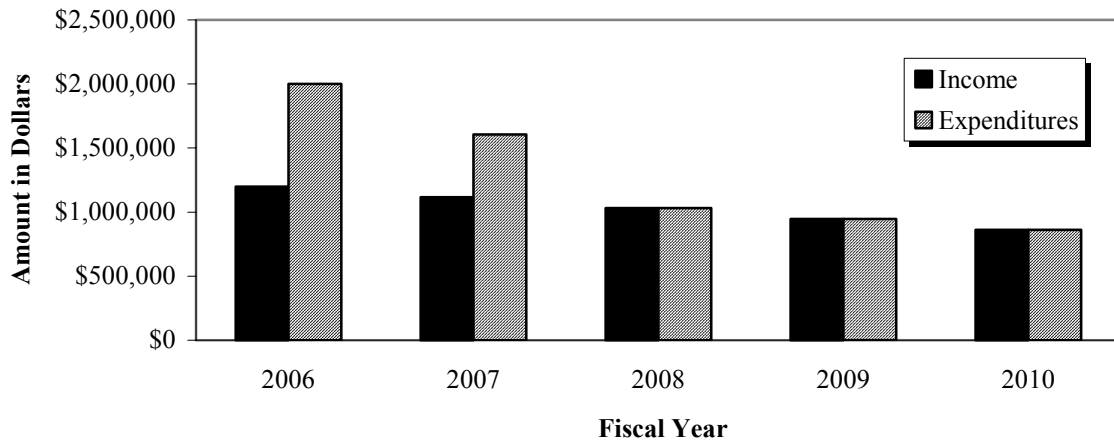
Direct-push (DP) methods have allowed Fund contractors to rapidly delineate contaminant plumes on most sites. This technology requires use of a small drill rig that pushes and hammers a metal core barrel into the ground. Soil and groundwater samples can be acquired by DP technology for rapid screening of contaminants in the field and eventual laboratory analysis. Unlike groundwater monitoring wells, which are installed and can be re-sampled many times, DP wells are designed to be temporary and inexpensive and are usually abandoned the same day they are drilled.

Five-Year Funding Projection

At the end of FY05, the Fund had a balance of \$1,291,000. However, DHEC has commitments for assessment and remediation totaling \$326,000. This leaves the uncommitted balance as of July 1, 2005 at \$965,000. Due to the uncertainty of the amount of money that the sales tax would generate, the program has delayed starting new site work. During FY06, DHEC anticipates expenditures and commitments of \$2,000,000 as new work is started.

To complete the funding projection, the program projected income into the Fund over the next five fiscal years. The historical trend shows income declining steadily from a high in 1997 until the sales tax was implemented (Figure 1). Using trend analysis, the projected income to the Fund will decline over the next five years to a level of \$863,000 in FY10 (Figure 3). It is possible, however, that the funding level will stabilize and the decreasing trend will not be realized over the next five years.

Figure 3 also includes a five-year projection of expenditures. This projection indicates that expenditures in FY06 and FY07 will exceed the income into the Fund. However, by FY08 the projection indicates that income and expenditures will be equivalent.



**Figure 3: Five-Year Projection of Income versus Expenditures
(actual dollar amounts in Table 1)**

Fiscal Year	Income to Fund	Total Spent
1996	\$928,545.65	\$42,582.84
1997	\$1,005,142.60	\$106,383.46
1998	\$908,516.14	\$115,929.62
1999	\$864,553.81	\$111,067.06
2000	\$842,913.75	\$308,156.47
2001	\$773,511.14	\$308,078.22
2002	\$657,242.36	\$1,553,734.08
2003	\$612,189.97	\$2,337,642.77
2004	\$654,508.34	\$1,540,095.94
2005	\$1,284,353.96	\$816,404.12
<i>2006</i>	<i>\$1,200,000</i>	<i>\$2,000,000</i>
<i>2007</i>	<i>\$1,115,646</i>	<i>\$1,607,049</i>
<i>2008</i>	<i>\$1,031,292</i>	<i>\$1,031,292</i>
<i>2009</i>	<i>\$946,938</i>	<i>\$946,938</i>
<i>2010</i>	<i>\$862,584</i>	<i>\$862,584</i>

**Table 1: Income and expenditures for the Fund, 1996-2005.
Data for 2006-2010 (in *italics*) are projected.**

3. Public Participation in the Drycleaning Program

One of the goals of the Drycleaning Restoration Trust Fund program is to encourage public participation in the remedy selection process. Community involvement in the program is important for several reasons. Primarily, it gives local residents an opportunity to have input into choosing a remediation strategy and allows them to address any concerns that they may have about the site. People living near a site may be aware of conditions that could influence the effectiveness of the available remedies. On several occasions, sharing of such important information has substantially aided DHEC's understanding of the site and has steered the remedy choice.

Once appropriate analytical information has been collected on a drycleaning site, a contractor is assigned to review the various technologies that may be effective for cleaning it up. A Feasibility Study (FS) from the contractor provides an in-depth evaluation of the site characteristics and information on the remedies that can be used. Some remedies are eliminated early in the process as impractical for the site. The others are developed further with detailed information on implementation strategies and cost estimates. While the FS will usually point to one or two remedies as clear-cut choices, public input is sought before final selection of a remedy.



Front counter area inside Main Street Cleaners, Marion.

Information about the site and its upcoming remediation is distributed to the public via a legal notice in the local newspaper and letters to area residents, local government officials, and locally-elected members of the S.C. General Assembly. A public meeting is scheduled for a location near the drycleaning site, and the time and place are advertised in the legal notice and letters. At the meeting, a DHEC spokesperson presents an overview of site conditions and explains the potential remedies that have been considered, and an open forum with a question-and-answer session follows. A court

reporter compiles an official transcript of the meeting, and people are encouraged to call the program's toll-free telephone number if they have further questions.

A thirty-day public comment period starts at the conclusion of the meeting. All written comments submitted to DHEC and all comments recorded during the public meeting are considered prior to finalizing the remedy selection. The final remedy is documented in a Record of Decision (ROD) signed by the Deputy Commissioner of DHEC's Environmental Quality Control. The ROD includes a response to each comment. These responses are also provided to the person who made the comment. Additionally, an official document repository is established in the community, usually at the public library. The repository includes copies of analytical data, FS, meeting transcripts, the ROD, and any other documents on which the remedy selection may have been based. Since the amount of documentation may be overwhelming for some public libraries, electronic copies of the documents have been provided to some locations. A complete copy of the repository is also available for public review during normal business hours at the DHEC Bureau of Land and Waste Management, 8911 Farrow Road, Columbia, SC.

Through 2005, eleven public meetings have been held prior to selecting a remedy for sites in the drycleaning program. Additionally, three other meetings have been held to inform the public about ongoing assessment activities for sites that have large off-site groundwater contamination plumes. For these three meetings, area residents were asked to contact DHEC if they had a private groundwater well that could be used for sampling. By these actions, additional private-well sampling points were identified that reduced the total number of monitoring wells to be installed and therefore saved the Fund money.

On March 22, 2005, a public meeting was held for the Dryclean USA – 70 Pope Avenue site in Hilton Head, and a ROD was signed May 16, 2005. A public meeting was also held November 17, 2005 for the Prosperity Dry Cleaners site. For 2006, we anticipate several more public meetings as assessment activities are concluded on sites.

4. Prioritization

Drycleaners that have registered with DOR are not eligible for the Fund until a completed eligibility application is filed with DHEC. The eligibility application documents such information as which solvent(s) is used at the site, how long the drycleaner has been in operation, and how the waste products from the cleaning process are disposed. The applicant (usually the drycleaning business owner or land owner) certifies in the application that the drycleaning plant meets all of the eligibility criteria specified in the law. DHEC assigns a priority ranking to the site using information provided in the eligibility application.

The priority rank is determined by a scoring system that emphasizes potential threats to human health that can occur from drycleaning solvent contamination. The scoring system makes assumptions about the potential human exposures to contamination from a site. One common assumption used in scoring the sites is that nearby people use private wells as their source of drinking water if public water lines do not serve the area. Other assumptions are based on site-specific information about the age of the plant, the types of solvents used, regional geology, and surrounding land use. Unless a particular exposure pathway from the site is known to be nonexistent, it is assumed that a potential threat is present via that mechanism. While this approach can overestimate the health threat of a site, it is designed so that a potential threat does not get overlooked.

Section 6 is a listing of all sites that are potentially eligible for the Fund along with their priority ranking. The lower numbers (i.e., 1, 2, 3, etc.) are assigned to the sites that are most likely to have the greatest health effect, thus site #1 is the highest priority site in the state and is thought to be the site most likely to affect the largest number of people. Some of the sites do not yet have a priority ranking. This is primarily because the drycleaner has registered with DOR (and is thus potentially eligible for the Fund) but has not filed an eligibility application with DHEC. The legislation that was passed in 2004 allows more applications to the Fund, and DHEC is currently in the process of receiving and evaluating dozens of new applications.

Once eligibility determinations have been made on these new sites, field surveys will be made on all sites that have come into the Fund over the past several years, and prioritization will then be conducted on all un-ranked sites. We anticipate field surveys of the approximately 100 new sites being completed in the winter of 2005-06 and prioritization being completed in the summer of 2006. Subsequently, a new priority list will be available for public review.



5. Site Summaries: Fund-Led Assessment and Remediation Activities

Using the priority list, site work is assigned to licensed environmental contractors that are overseen by DHEC. Work is assigned from the #1 site on down. To date, the program has worked on 29 sites. As seen in the summaries below, the priority ranking was followed in most cases. However, some sites have been skipped in favor of others further down the list. A few of the skipped sites did not meet all of the required criteria before the Fund could be used for assessment. Some of these later met the criteria and work consequently began later. Some sites were also skipped to minimize costs to the Fund: By assigning sites that are in close proximity to one another to a single contractor, work can occur simultaneously, saving money for the Fund. Because there are similarities among the sites in terms of solvent used, geology, and amount of contamination, the ranking is not that diverse. The #10 site could be very similar to the #60 site.



Soil samples from a macro-core sediment recovery apparatus. These soil samples are used to determine the underlying geology of a site. Knowledge of the soil and rock that contains the groundwater under a site is critical for deciding which remediation method will be optimal at a particular site.

Remediation systems have not been installed in priority order. Some of the sites have proven to be more complex and have taken more time to investigate. Therefore, the remediation of these sites has had to wait until the investigation is complete. This could result in the remediation of the more simple and perhaps lower priority sites first. In addition, once the full extent of the contamination is known, DHEC addresses the sites with the greatest impact first when prioritizing sites for remediation. For example, a site that is ranked higher may upon investigation prove to not have as much contamination or impact as a site that is of lower rank.

In May 2004, new legislation made it possible for sites to join the Fund with a \$1,000 deductible if they applied for eligibility by November 24, 2005. After these new sites are ranked and a new priority list is generated, there may be significant changes upon comparison to the current priority rankings.

Colonial Cleaners
97 Magnolia Avenue
Denmark
Priority #1

Budgets:

Assessment \$ 477,978

Remediation \$ 614,435

Actual Spent to Date \$ 1,029,167

Status: **Site Assessment Complete**
 Remediation System Installed and Operating



Colonial Cleaners is a full-service drycleaner and self-service coin laundry that has operated since 1965. The facility uses PCE as the drycleaning solvent. Colonial Cleaners is located in a stand-alone building on the southwest side of the town of Denmark. The surrounding properties are commercial and industrial.

In addition to the usual solvent releases that occurred at older drycleaning plants, PCE was sprayed around the exterior of the building to kill weeds. This reportedly occurred for many years, potentially allowing a large quantity of PCE to enter the environment.

The Colonial Cleaners site has the distinction of being both the #1 priority drycleaning site and the site with the most impact on public resources. Extensive groundwater contamination has been found that threatens Denmark's public water supply. Denmark uses local groundwater for its public water. The nearest public supply well, the Brooker Center well, is located approximately 1400 feet northeast of the site. Two other Denmark public supply wells are within a mile to the southeast. When assessment activities began, a shallow well serving a mobile home park was located 1000 feet east of the site. The well in the mobile home park has since been abandoned for reasons unrelated to the drycleaning site.

The geology of this region is among the most difficult in the state to assess. Inter-bedded layers of sands, clays, porous limestone, and other sediments cause groundwater to flow

in unexpected directions. Flow of groundwater and contamination is affected by pumping of the public supply wells. Contamination is found deeper than can be sampled with direct-push (DP) technology. Therefore, the site was assessed using a mixture of traditional monitoring wells (MW) and DP methods. These factors considerably increased the assessment costs.

The site investigation took place between March 2000 and August 2002. The assessment included samples from 13 DP soil profiles, 31 DP groundwater profiles, and 34 permanent monitoring wells installed at depths ranging to 200 feet. Soil contamination was found around the drycleaning facility. However, there is no evidence of direct contact exposure. PCE was found in the sewer lines, indicating that solvent was released into the sewer in the past. Contamination in the sewer sediments is not a concern from a human health perspective but may be a source of continuing groundwater contamination.

Distinct groundwater contamination plumes, moving in different directions, have been identified. The upper plume is found between 40 and 110 feet deep and is moving toward the southeast. It is approximately 300 feet long and 175 wide. The highest concentration of PCE (39,300 ppb) is found near the drycleaning plant. The deeper plume is found between 128 and 145 feet deep and is moving gradually northeast toward a public supply well. The deeper plume stretches 600 feet from the drycleaning plant and is 420 feet wide. The deeper plume's maximum concentration of PCE (3,840 ppb) is less than that of the upper plume, but it still exceeds the drinking water standard of 5 ppb.

The Brooker Center public well has been sampled many times and has shown trace concentrations of PCE. The highest level so far (2.45 ppb) is below the drinking water standard. Trace levels of other compounds not typically found at drycleaning sites have also been detected in the Brooker Center well.

A public meeting was conducted in Denmark on February 19, 2003 to discuss the various clean-up options for the site. After evaluating several alternatives, Ozone Sparging was selected for remediation of the groundwater and soil contamination. Contingency plans were developed to inject potassium permanganate into the sewer system in the event that the PCE contamination in the sewer continues to feed the groundwater plume. The selected remedy also includes plans for ozone treatment of the Brooker Center well in the event that the PCE concentration increases above the drinking water standard. A ROD adopting the remedial plan was signed on April 21, 2003. The total estimated cost of the proposed remedy (\$614,435) includes five years of operation and maintenance costs.

Installation of the ozone sparging system began in June 2003. Twenty-eight sparge wells were installed in the most heavily contaminated zones. During the most recent sampling event (September 2005), concentrations of PCE have dropped dramatically (for example, from 32,900 ppb to 3,350 ppb in MW-2) due to the operation of the ozone remediation system.

**Anderson's Cleaners
197 Ireland Creek Road
Walterboro
Priority #2**

Budgets:

Assessment \$ 142,369

Remediation \$ 0

Actual Spent to Date \$ 132,747

**Status: Site Assessment Complete
Feasibility Study to be Completed**

Anderson's Cleaner is a full-service drycleaner and self-service coin laundry that has operated since 1968. The drycleaner uses PCE as the drycleaning solvent. The drycleaning plant is in a stand-alone building adjacent to a grocery. Nearby land use is commercial and retail. A large creek, Ireland Creek, is located 400 feet from the facility.

The city of Walterboro uses local groundwater for its public water supply. The nearest public supply well is located less than 200 feet from the drycleaning plant. A regional geologic confining layer should prevent downward migration of the contamination to the groundwater supplying the public well. No drycleaning solvents or breakdown components have been detected in the public well during periodic testing conducted by the DHEC Bureau of Water. There are no known private wells within two miles of the site.

The site investigation began in March 2003 and was completed in 2005. Samples have been analyzed from 10 DP soil profiles, 17 DP groundwater profiles, 16 temporary wells hand-augured in areas inaccessible to the drill rigs, and 14 permanent monitoring wells. Low levels of drycleaning solvents have been found in the sewer lines leading away from the drycleaning plant. There is an area near the creek that is impacted by contamination. Pore-water sampling of the creek's sediments was conducted to determine the extent to which the creek had been impacted. Contamination has been detected in Ireland Creek, but levels are below surface water quality criteria.

Shallow groundwater contamination was encountered at depths of four feet. The deepest extent of the contamination is approximately 25 feet. PCE concentrations of up to 4,200 ppb have been detected in groundwater. PCE breakdown components are present at the site, including trichloroethylene (TCE) at 6,360 ppb, dichloroethylene (DCE) at 3,720 ppb, and vinyl chloride (VC) at 720 ppb. All exceed the drinking water standard. An FS will be completed in preparation for remediation of this site.

**Former Market Place Cleaners
11 Palmetto Bay Road
Hilton Head
Priority #3**

Budgets:

Assessment \$ 146,300

Remediation \$ 521,336

Actual Spent to Date \$ 623,902

**Status: Site Assessment Complete
 Remediation System Installed and Operating**

The Market Place Shopping Center was a strip mall on the edge of a residential area on Hilton Head Island. Various companies operated a full-service drycleaning plant at one end of the strip mall from 1974 until 1992. From 1992 to 1999, the location was used as a drycleaning dry-drop store but did not perform drycleaning on the premises. Market Place Cleaners is thought to have only used PCE while in operation.



In 1999, the strip mall was razed and a new shopping center, Island Crossing, was built in its place. During the process, temporary monitoring wells installed by the developer found groundwater contaminated with PCE. Because the site qualified for the Fund, the developer was able to continue construction of the shopping center without having to further delineate and remediate the contamination.

The new shopping center includes a mixture of a grocery, small retail shops, and restaurants. The surrounding property consists of retail and residential areas, which are mostly occupied by full time residents of the island. Blueprints of the shopping center show the area corresponding to the previous drycleaning plant was covered by four feet of clean fill dirt and asphalted over as the parking area.

The city of Hilton Head uses local groundwater for its public water supply. At the time that the site investigation was begun, a shallow public supply well was located approximately 400 feet southeast of the drycleaning plant location. Since then, Hilton Head has stopped using the well for reasons unrelated to the drycleaning site. The city continues to supply public drinking water from other wells located within two miles of the site.



The investigation was conducted from February 2000 through January 2001. Samples were analyzed from surface water located adjacent to the site, numerous DP soil and groundwater profiles, and 18 permanent monitoring wells installed by the Fund. In the photo at left, a monitoring well is being installed in the parking lot using roto-sonic drilling techniques.

A groundwater contamination plume was found extending from the drycleaning plant into a residential area of Sea Pines Plantation. The highest level of contamination (27,000 ppb PCE) was found under the approximate location of the old drycleaning machine (based on blueprints of the original strip mall). PCE breakdown components were also found greatly elevated above their drinking water standards. The contamination extended under an area approximately 100 feet wide and 300 feet long. It was found from the top of the water table down to 45 feet.

The groundwater plume does not move towards the nearby public supply well but rather moves 90° towards the southwest. However, the plume moves in the direction of a drainage canal flowing through the Sea Pines Plantation housing area. Samples collected from the drainage canal found trace levels of PCE breakdown components, but these were at concentrations lower than regulatory levels set for protection of fishery waters.

A public meeting was held in Hilton Head on August 29, 2001 to discuss the various clean-up options available for the site. After evaluating several alternatives, Ozone Sparging was selected for remediation of the most highly contaminated groundwater. Monitored Natural Attenuation was selected for the lower concentration areas found under the Sea Pines Plantation. A contingency plan was developed that would extend the ozone sparging into the Sea Pines Plantation neighborhood in the event that the plume concentrations did not decrease after the worst contamination was remediated.

Installation of the ozone sparging system was completed by June 2002. Six sparge wells were installed in the most heavily contaminated zone and connected to an ozone generator. The most recent sampling results show that the contaminant concentrations have decreased by more than 98% and that the plume has decreased in size to just one small area where the drycleaner used to be located. At this location, PCE concentrations have dropped from 26,800 ppb to 1,340 ppb. After the system is turned off, the site will be monitored for several years to ensure that the contaminants levels do not rebound to high values.

Curry's Cleaners
1506 Highmarket Street
Georgetown
Priority #4

Budgets:

Assessment \$ 142,661

Interim Removal Action \$ 40,664

Actual Spent to Date \$ 183,325

Status: Interim Removal Action Complete
Site Assessment Complete

Curry's Cleaners is a full-service drycleaner that has operated since 1968. The drycleaner is located in a stand-alone building within a commercial area. Curry's Cleaners used PCE that was stored in an aboveground tank inside the building. PCE was also stored behind the building in drums that rusted and leaked. The rear of the site borders residential areas. Because the site is barely above sea level, periodic heavy rains cause localized flooding that may carry contaminated soil onto residential property and result in direct contact exposure.

The site investigation began in February 2000. Originally, activities were targeted to delineate the threat from soil contamination. Two soil areas were found with extremely high levels of contamination. These areas were susceptible to flooding and were readily accessible to the public.

A public meeting was held in Georgetown on August 9, 2001 to discuss the clean-up options available for on-site soils. Various innovative technologies were considered that could treat the contamination on-site. However, conventional excavation with off-site disposal was determined to be the most cost-effective solution. A ROD adopting the Interim Removal plan was signed on October 8, 2001. Thirty tons of contaminated soil were excavated during January 2002 and removed from the site to an approved landfill.

Groundwater contamination was discovered during the initial investigation, and further investigation of the groundwater took place between July 2002 and May 2003. The investigation included analysis of samples from numerous DP soil and groundwater profiles and 27 permanent monitoring wells. Groundwater contamination has been fully delineated and a Site Assessment Report was finalized in 2003.

The highest PCE concentration reported in the groundwater is 67,000 ppb. Concentrations of the PCE breakdown components were discovered above their respective drinking water standards. Groundwater contamination begins at the top of the water table (5 to 7 feet deep) and continues to approximately 50 feet below the ground surface. The groundwater plume extends under an area of 800 feet wide by 420 feet long. There are no nearby groundwater wells used for drinking water.

Former Thompson Cleaners
218 Bell Street
Bamberg
Priority #5

Budgets:

Assessment \$ **121,416**

Remediation \$ **0**

Actual Spent to Date \$ **10,311**

Status: Site Assessment Ongoing

The former Thompson Cleaners operated as a commercial drycleaner from about 1950 until 1984. The drycleaner building, now vacant and boarded up, is located near the center of Bamberg and is surrounded by commercial, retail, and vacant properties. The plant was using petroleum-based drycleaning solvents when it stopped operating. However, it is not known if other solvents were ever used. The initial soil sample collected by the drycleaner's contractor did not find contamination in 1997. A subsequent Secondary Assessment overseen by DHEC in May 2002 found PCE and naphthalene, a component of petroleum-based solvents, in the soil and established the site as eligible for the Fund. This suggests that both solvents may have been used at some time.

The town of Bamberg uses local groundwater for its public water supply. Three public supply wells are located within 0.2 mile of the drycleaning plant. There may also be private wells nearby that can be used for groundwater sampling.

A work plan has been approved for the site investigation. Soil and groundwater testing began in November 2005.

Prosperity Cleaners
126 Grace Street
Prosperity
Priority #6

Budgets:

Assessment \$ 73,549

Remediation \$ 0

Actual Spent to Date \$ 73,549

Status: Site Assessment Complete
Project Referred to the DHEC Underground Storage Tank Program

Prosperity Cleaners is a full-service drycleaner that has used Stoddard solvent (petroleum based) since it began operation in 1947. The drycleaning facility is located near the center of the town of Prosperity, and nearby land use is retail and residential. Prosperity uses local groundwater for its public water supply. Two public supply wells are located within a quarter-mile of the drycleaning plant. No private wells are known to exist within the plume area.

The site investigation began in June 2000 and was completed in November 2002. Because of the nature of the geology in the region, DP sampling techniques could not be used. Instead, traditional monitoring wells had to be drilled in multiple phases over several months. Four groundwater monitoring wells were installed in May 2001. Based on the results from the wells, three additional wells were installed in July 2002.

The Fund's investigation discovered components of gasoline in groundwater near the site. Benzene was detected at 1,200 ppb, exceeding its drinking water standard of 5 ppb. Based on the location of the contamination, it was concluded that the contamination originated from a gasoline underground storage tank near the drycleaning plant. Compounds related to fuel oil were also detected in soils on-site. The site utilized an underground storage tank for storage of fuel oils, and spillage may have occurred as a result of product transfer. The project was referred to the DHEC Underground Storage Tank (UST) Program for further evaluation of petroleum compounds in groundwater.

Analytical results do not indicate that an impact has occurred as a result of drycleaner operations. DHEC will recommend that the site undergo a round of groundwater sampling and then resample five years later to ensure that conditions on-site have not changed. The program conducted a meeting in Prosperity on November 17, 2005 to review the drycleaner site findings and receive input from the public concerning the recommended remedial option.

Edwards Cleaners
4444 Rosemary Street
Williston
Priority #7

Budgets:

Assessment \$ 490,356

Remediation \$ 0

Actual Spent to Date \$ 490,356

Status: Site Assessment Complete
Remedial Options being evaluated



Edwards Cleaners shares a small retail building with a barbershop on the south edge of the town of Williston. With the exception of an adjacent retail propane supplier, all of the surrounding properties are residential. Three different companies have operated the drycleaning plant since it opened in 1953, with Edwards Cleaners operating it for the past ten years.

The previous owners used PCE in one drycleaning machine and Stoddard in a second machine. The PCE machine was apparently a “transfer” machine and used a separate stand-alone dryer. An aboveground PCE storage tank was located outside the plant. All PCE-based equipment was removed before Edwards Cleaners began operating and Stoddard has been the only solvent in use during the past 10 years.

Williston uses local groundwater for its public water supply. The nearest public well is located approximately 2000 feet northeast of the site. Residential areas south of the town use private wells for drinking water and irrigation water supply.

The site investigation began in April 2001. Some of the contamination is deeper than can be sampled with DP apparatus, thus the site was assessed with DP methods as well as permanent monitoring wells. Soil and groundwater samples have been collected and analyzed from 57 DP profiles and 59 permanent monitoring wells installed by the Fund.

Groundwater contamination occurs from approximately 30 feet to 100 feet deep. The highest concentrations of PCE (5,800 ppb) are encountered immediately below the drycleaning plant. The 120-acre plume covers an area 1100 feet wide by 4800 feet long and stretches nearly a mile to the south of the drycleaning plant. The groundwater plume is unlikely to influence the public supply wells used by Williston. Eight private wells near the southern fringe of the plume have been sampled. One private well has been found to contain 100 ppb of PCE. While this concentration is above the drinking water standard (5 ppb), the well is only used for irrigation water and the contamination does not interfere with the use of the well for irrigation.

PCE has been detected at 13 ppb in surface water of an unnamed creek that originates from ponds and a spring near the high school and U.S. Highway 78. Sediment collected at the same location did not contain measurable contamination. The surface water PCE concentration of 13 ppb is greater than both the drinking water standard (5 ppb) and the DHEC surface water quality criteria for protection of fishery waters (8.85 ppb). PCE was also detected in three additional downstream locations at concentrations ranging from 5 ppb to 13 ppb. PCE was not detected in surface water locations from the actual fishery area (a pond) or below the pond.

A public meeting was held at the Williston Town Hall on March 6, 2004 to inform the public about the extent of the groundwater contamination from the Edwards Cleaners site. Using all the available assessment data, an FS will be completed in 2006 to evaluate remediation options for the site.



During October and November 2005, a full round of sampling from monitoring wells, private wells, and surface water was conducted. At left, a groundwater monitoring well sample is collected from a passive diffusion bag.

One Hour Martinizing
409 Pearl Street
Darlington
Priority #8

Budgets:

Assessment \$ 176,701

Remediation \$ 246,465

Actual Spent to Date \$ 409,722

Status: Site Assessment Complete
Remediation System Installed

One Hour Martinizing is a full-service drycleaner that uses PCE and petroleum-based solvents. Various companies have operated it since 1965. The current facility operator uses PCE in two dry-to-dry machines and petroleum-based solvent in one dry-to-dry machine. The site is located in a stand-alone building in a small shopping mall near the center of Darlington. The surrounding area is a mixture of commercial, town government, retail, and residential areas.

The town of Darlington uses local groundwater for its public water supply. The nearest public supply well is located approximately 1,500 feet to the east. There are no known private wells within a 2-mile radius of the site.

The site investigation was conducted in phases from May 2001 through March 2002. Samples have been analyzed from 14 DP profiles and 23 permanent monitoring wells installed by the Fund. A groundwater contamination plume approximately 800 feet long by 150 feet wide was delineated moving from the drycleaning plant to a drainage ditch northwest of the site. This flow direction is away from the public supply wells. An underlying clay layer restricts the downward movement of the plume to only 24 feet deep. The highest concentration of PCE in the plume (180 ppb) is found underlying the drycleaning plant. Most of the plume area has concentrations below 50 ppb that are above the drinking water standard.

Soil was sampled behind the drycleaning plant in an unpaved area that formerly was the location of a solid waste dumpster. PCE concentrations (150,000 ppb) exceeding the levels set for industrial exposure in soil were found. Sewer lines leading away from the drycleaner have been impacted with PCE.

A public meeting was held in Darlington on October 22, 2002 to discuss the various clean-up options available for the site. After evaluating several alternatives, Potassium Permanganate Injection was selected for remediation of the groundwater contamination plume. Excavation and off-site disposal was selected for the area of soil contamination. The remedial plan includes a provision to remove the PCE from the sewer lines if groundwater concentrations do not decrease after injection of the permanganate. A contingency plan is also included that would remove PCE from the small creek with an

air-bubbling system in the event that the groundwater remediation causes the PCE to be detected in the fishery portion of the creek. A ROD adopting the remedial plan was approved January 6, 2003.

Remediation activities began in June 2003. Ninety tons of contaminated soil were removed from the rear of the plant and the area was covered by clean fill dirt. The first round of potassium permanganate was injected via DP injection points throughout the groundwater plume. Groundwater monitoring has shown reduction in the contaminant levels on the site. PCE concentrations in monitoring well MW-4 have decreased from 111 ppb to 1.4 ppb (below the drinking water standard). Monitoring well MW-5 has decreased from 150 ppb to 28 ppb of PCE. Based on continued monitoring of the site's groundwater conditions, additional injections of permanganate may be required.



Knightsville Cleaners
1580 Central Avenue
Summerville
Priority #9

Budgets:

Assessment \$ **81,019**

Remediation \$ **0**

Actual Spent to Date \$ **81,019**

Status: Site Assessment Complete

Knightsville Cleaners is a full-service drycleaner that has been operating since approximately 1969. The drycleaner has used PCE as the drycleaning solvent. The drycleaning plant operates in the end unit of a small strip office/retail building in the Knightsville community on the outskirts of Summerville. The drycleaning plant is adjacent to a small restaurant. Nearby land is used as an auto body shop, fire station, rural farm fields, and residential areas. The rear of the drycleaning plant borders on freshwater wetlands and a small creek.

The Dorchester County Water Authority uses local groundwater for the public drinking supply. The nearest public supply well is located less than 900 feet from the drycleaning plant. Mobile home parks in the vicinity have their own shallow wells for drinking water. There may be private wells within two miles of the drycleaning plant, but none are known within the contamination zone.

The site investigation was conducted between October 2001 and April 2003. Samples were collected from surface water adjacent to the site, numerous DP soil and groundwater profiles, and 17 permanent monitoring wells. A small groundwater contamination plume has been delineated near the drycleaning plant that extends into the freshwater wetlands area. The plume covers an area of approximately 80 feet by 200 feet (0.37 acres). The

contamination is found from the top of the water table (5 feet deep) down to 36 feet deep. The highest PCE concentration (500 ppb) is detected under the wetlands. PCE breakdown components have also been detected, indicating that natural sediments in the wetlands may be aiding breakdown of the drycleaning contaminants.

Characterization of the groundwater plume has been completed and summarized in a Site Assessment Report. The site will continue to be evaluated as it awaits prioritization for remediation.

Belvedere Cleaners
502 Clearwater Road
Belvedere
Priority #10

Budgets:

Assessment \$ **125,135**

Remediation \$ **0**

Actual Spent to Date \$ **81,604**

Status: **Site Assessment Ongoing**

Belvedere Cleaners has been operating as a commercial drycleaner since 1964. The facility used Stoddard, a petroleum-based drycleaning solvent. Belvedere Cleaners is located on the outskirts of Belvedere. The area surrounding the site is residential and commercial.

The town of Belvedere uses local groundwater for its public water supply. A public supply well is located within 0.3 mile of the drycleaning plant. There may also be private wells within two miles of the site, but none are known within the immediate vicinity.

The initial soil sample collected by the drycleaner's contractor did not find contamination in 1997. A subsequent Secondary Assessment overseen by DHEC in May 2002 found petroleum-based solvents in the soil and established the site as eligible for the Fund. Soil and groundwater samples have been collected using DP technology. Analytical results revealed detections of TCE in one groundwater sample that was below the drinking water standard. There was also a detection of TCE in a surface water sample. The next step will be to install and sample monitoring wells during the next year.

**Color Craft Cleaners
9008 Marlboro Avenue
Barnwell
Priority #11**

Budgets:

Assessment \$ 50,891

Remediation \$ 10,901

Actual Spent to Date \$ 54,904

**Status: Assessment Complete
 No Remediation System Required
 No Further Action**

Color Craft Cleaners has operated as a drycleaners since 1969. The facility used Stoddard, a petroleum-based drycleaning solvent. The facility is located on the outskirts of Barnwell. The area surrounding the cleaners is residential and commercial. The town of Barnwell uses local groundwater for its public water supply. Four public supply wells are located within 0.5 mile of the drycleaning plant. No private wells have been identified within a quarter-mile of the site.

The site investigation was completed using a combination of four DP profiles followed by installation of five permanent monitoring wells. A small PCE contaminant plume was identified in groundwater on-site. However, the concentrations were below the drinking water standard. PCE is a common ingredient of some spotting agents used by drycleaners to get difficult stains out of garments. Analysis of soils from the site also shows the presence of compounds related to Stoddard solvents. It appears that the underlying soils have prevented the Stoddard contamination from entering the groundwater.

A public meeting was conducted in Barnwell on November 14, 2002 to discuss the investigation findings and outline a plan to monitor the site for three years to ensure that the contamination is not moving off-site. A ROD adopting the monitoring plan was signed on April 14, 2003.

The Fund has monitored the groundwater at the site since 2003. Monitoring data indicate that concentrations are below the drinking water standards. Therefore, a “No Further Action” designation has been given to the site. The monitoring wells will remain in place for five years, until being re-sampled. If results at that time indicate the concentrations remain below the allowable limits, the program will remove the wells. If concentrations have increased, further sampling and assessment will be performed.

Joye One Hour Cleaners
1017 Godbold Avenue
Marion
Priority #12

Budgets:

Assessment \$ **317,985**

Remediation \$ **401,805**

Actual Spent to Date \$ **696,423**

Status: **Site Assessment Complete**
 Remediation System Installed and Operating



Joye One Hour Cleaners is a full-service drycleaner that began operating in the early 1970's. The facility uses PCE as the drycleaning solvent. The drycleaner is located in a stand-alone building in Marion. Nearby land is commercial, light industrial, retail, food service, and residential.

The city of Marion uses local groundwater for its public water supply. The nearest public supply well is approximately 0.4 mile from the drycleaning plant. Six other public supply wells used by Marion are located within 1½ mile. Private wells scattered throughout the area may potentially be used for drinking water. Three private wells found close to the site are only used for irrigation purposes.

The site investigation was conducted from June 2001 through February 2003. Samples have been analyzed from 20 DP soil profiles, 34 DP groundwater profiles, 36 permanent monitoring wells installed by the Fund, 6 monitoring wells from a nearby underground storage tank site, 3 private irrigation wells, and numerous sewer and storm water access points.

Significant concentrations of PCE were detected in the soil and groundwater around the drycleaning plant. The highest concentration of PCE in the groundwater near the facility was 31,000 ppb. However, the highest PCE concentration of all (93,000 ppb) was found

more than 300 feet away at a gasoline station. To further complicate the assessment situation, the highest concentration was found in the opposite direction from where groundwater flow could carry contamination from the drycleaning plant.

After an evaluation of the sewer system, sewer lines were found to have been broken near the area with the highest PCE concentration. Apparently, drycleaning solvents released years ago into the sewer system leaked from the break into the underlying soil. The contaminated soil creates an additional source area that contaminates the groundwater. The two contaminant plumes join together to form one plume that is approximately 650 feet long and 600 feet wide. Contamination across the 12-acre area extends to a depth of 45 feet.

Because of the elevated PCE concentrations found at shallow depths, the site was evaluated to determine if drycleaning solvent vapors could build up to potentially harmful concentrations in buildings overlying the contaminated area. Results of soil-gas testing and interior building samples indicate that drycleaning vapors are not permeating into the buildings. An additional round of sampling will be performed later to confirm these results. A public meeting was held in Marion on March 20, 2003 to discuss the various clean-up options available for the site. After evaluating several alternatives, Ozone Sparging was selected for remediation of the groundwater and soil contamination. A ROD adopting the remedial plan was signed on May 19, 2003.

The ozone sparging system was installed November 2004. Sampling results show a remarkable reduction in contamination concentrations. Monitoring well MW-5, located near the drycleaner, has decreased from 31,600 ppb to 520 ppb of PCE. Monitoring well T-7, located at the gasoline station, decreased from 93,000 ppb to 20,000 ppb of PCE. It is anticipated to take longer to clean up drycleaning solvents at the gasoline station due to the concurrent presence of gas in the groundwater.

**Main Street Cleaners
208 North Main Street
Marion
Priority #13**

Budgets:

Assessment \$ **180,883**

Remediation \$ **32,187**

Actual Spent to Date \$ **181,133**

**Status: Site Assessment Complete
 Monitored Natural Attenuation with Semi-Annual Sampling
 Project Referred to DHEC Underground Storage Tank Program**



Main Street Cleaners is a full-service drycleaner that has only used Stoddard (petroleum-based) solvent since it began operation in 1940. However, PCE has been detected in on-site samples. The drycleaning plant is located at one end of a small retail building near the center of Marion. Various businesses, a bank, a gasoline station, and residential areas occupy nearby properties.

The city of Marion uses local groundwater for its public water supply. The nearest public supply well is approximately 0.3 mile from the drycleaning plant. Six other public supply wells used by Marion are located within 1½ mile. Private wells may be scattered throughout the area and may potentially be used as a source of drinking water.

The site investigation began in May 2001 and was completed in November 2002. Samples have been analyzed from four hand-augured soil borings, eight DP groundwater profiles, and 24 permanent monitoring wells installed by the Fund.

Low concentrations of PCE were found in groundwater samples collected early in the investigation but have not been found since. Concentrations of the petroleum-related compounds benzene (512 ppb) and toluene (1,910 ppb) were found in excess of their respective drinking water standards. Based on the detections of petroleum compounds, it was concluded that the groundwater plume is the result of leakage from an undocumented underground storage tank at a gas station that used to be near the drycleaning plant.

A public meeting was conducted in Marion on August 12, 2004 to discuss the various options available for remediation. A ROD was signed on October 11, 2004. While the DHEC UST program completed a removal at the site to address the old gas station petroleum tanks, the Fund will retain responsibility over the drycleaning portion of the site. Since there is a possibility that the petroleum leaks may mask the contamination from the drycleaning plant, the Fund will be used to monitor the site for three years. The site will be closed out if no further drycleaning contamination is found at that time.

Becknell Cleaners
201 North Congress Street
Winnsboro
Priority #15

Budgets:

Assessment \$ 237,237

Remediation \$ 550,000

Actual Spent to Date \$ 237,237

Status: **Site Assessment Complete**
 Remedy Selected



Becknell Cleaners started operating in 1970 as Cale's Cleaners. It used PCE until switching to a petroleum-based solvent in 1995. The site is located near the center of Winnsboro. Residences, a church, a gas station, and various retail enterprises occupy adjacent properties. There is no use of groundwater near the site.

All of the surrounding population uses public water supplied by Winnsboro from surface water intakes located miles away from the drycleaning plant. There may be private wells within two miles of the drycleaning plant, but none are known within the contamination zone.

Initially, the site was of concern because the muck disposal area is uphill of several houses. There was a concern for human exposure because surface water runoff could deliver contamination onto residential properties. Testing conducted during the site investigation reveals that there is no potential health threat from surface contamination.

The site investigation began in November 2001. Work began with the installation of shallow permanent groundwater wells and collection of shallow and deep soil samples. Because the regional geology prevents use of DP apparatus, conventional monitoring wells were installed over several phases from November 2001 to January 2003.

A PCE concentration of 160,000 ppb was detected in the groundwater immediately below the plant. This concentration is the maximum amount of PCE that can dissolve into water. The data indicate low levels of TCE, a breakdown component of PCE, thus the PCE is degrading naturally.

Groundwater appears to flow in two directions from the drycleaning plant. The larger component of groundwater flow moves northeast and discharges to a small creek. The main contaminant plume extends 118 feet deep into saprolitic soils and continues at least 50 feet down into the bedrock fractures. A portion of the plume splits off at the plant and flows approximately 150 feet towards the southwest. The total area impacted by the contamination is approximately 8 acres.

Surface water and sediment samples were collected from the creek northeast of the plant. The concentrations of PCE (1,400 ppb) and TCE (42 ppb) at the head of the creek exceed regulatory levels set for protection of fishery waters. No detectable concentrations were found further downstream.

A public meeting was held in Winnsboro on October 19, 2004 to discuss the various remedial options available for the site. A ROD was signed on February 7, 2005, and the Remedial Design and Remedial Action are scheduled for next year. Air Sparging with Soil Vapor Extraction was selected for bulk removal of the drycleaning solvents from the site. Potassium permanganate injections will be used to treat any residual groundwater contamination plume. Since it is possible that the air sparging process will drive higher concentrations of PCE to the stream north of the site, an air-bubbler system will be installed in the stream to prevent PCE from flowing to the fishery area of the creek.

Belton One Hour Cleaners
420 South Main Street
Belton
Priority #16

Budgets:

Assessment \$ **221,487**

Remediation \$ **0**

Actual Spent to Date \$ **221,487**

Status: **Site Assessment Complete**

Belton One Hour Cleaners is a full-service drycleaner that has been operating since November 1971 and used PCE as the drycleaning solvent. The drycleaner is located at the end of a small strip mall. Adjacent businesses are primarily retail and food establishments. The rear of the strip mall borders a railroad track that separates it from an industrial manufacturing complex and some undeveloped commercial property.

Groundwater is not used locally for public water supply. No private wells are known within the plume area or down gradient of any contamination.

The site investigation began in November 2001 and was completed in July 2002. Samples were analyzed from 31 DP groundwater profiles and 37 monitoring wells installed by the Fund.

Low concentrations of PCE were detected in the groundwater in the immediate vicinity of the drycleaning plant. However, sewer lines leading away from the drycleaner were impacted by releases of PCE that occurred before drycleaning solvents were regulated. Sampling of the sewer lines showed PCE at 217 ppb in one sewer sample. It also contained 169 ppb TCE and 315 ppb of DCE. Given these results, there was an indication that the sewer line may have caused an impact to soil and groundwater in areas away from the facility. Therefore, innovative soil-gas sampling was used to assist in finding potential release points from the sewer line. Using this method, three separate groundwater contamination plumes were found. All three plumes are relatively dilute (ranging in concentration from “not detected” to 216 ppb) and shallow (occurring from 20 to 59 feet deep). The first plume is approximately 250 feet long by 150 feet wide with a high concentration of 68.7 ppb of PCE in MW-05. The second plume is 400 feet long by 150 feet wide with a high concentration of 170 ppb in MW-06, and the third is 200 feet long by 125 feet wide with 216 ppb in MW-14. All of the plumes are located within a few hundred feet of the plant and flow into the industrial area.



DeLuxe Cleaners
19 Mill Street
Williamston
Priority #17

Budgets:

Assessment \$ **84,119**

Remediation \$ **27,000**

Actual Spent to Date \$ **84,119**

Status: **Site Assessment Complete**
 No Remediation System Required
 Site to be Re-tested after Five Years
 Project Referred to DHEC Underground Storage Tank Program



DeLuxe Cleaners is a full-service drycleaner that has only used Stoddard solvent since it began operation in 1945. The drycleaning plant is located near the center of Williamston. Nearby properties include a church, a post office, a car detailing shop, a childcare facility, and several residences.

Groundwater is not used locally for public drinking water. No private wells are known within the plume area or down gradient of any contamination.

The site investigation began in August 2001 and was completed in July 2002. Soil and groundwater samples from seven DP profiles were taken in November 2001. Based on the results, four groundwater monitoring wells were installed in February 2002. Four additional wells were installed in June 2002. The wells were sampled in July 2002 and again in June 2003.

The monitoring wells contained levels of three petroleum components with benzene (358 ppb) and ethyl-benzene (1,040 ppb) exceeding their respective drinking water standards. Based on the chemical analysis and the location of the contamination, it was concluded that the groundwater plume is attributable to a previously unknown underground storage tank at a gas station that used to be near the drycleaning plant.

As part of the investigation, liquids and sediments were also collected from the sewer system. There does not appear to be any significant spread of drycleaning solvents via this mechanism. There are no nearby surface water bodies that can be affected by the site.

A public meeting was held in Williamston on September 21, 2004 to review the drycleaning site findings with the public. A ROD adopting the remedial plan was signed on November 1, 2004. While the DHEC UST program will address the old gas station petroleum tanks, the Fund will retain responsibility for the drycleaning portion of the site. Since there is a possibility that the petroleum leaks may mask contamination from the drycleaning plant, the Fund will provide for retesting the site in five years. The site will be closed out if no drycleaning contamination is found at that time.

**Former Advance Cleaners
55 New Orleans Road
Hilton Head
Priority #18**

Budgets:

Assessment \$ **89,080**

Remediation \$ **0**

Actual Spent to Date \$ **89,080**

Status: Site Assessment Complete

The former Advance Cleaners was located in a small mixed-use business and retail center. Advance Cleaners operated as a drycleaners in this location from 1983 to 1991. The drycleaner used PCE as the solvent. The unit occupied by the drycleaner has been retrofitted into a restaurant and nothing remains of the former drycleaning operation. The area surrounding the former Advance Cleaners is a mixture of commercial, retail, medium-density residential, and golf courses.

The city of Hilton Head uses local groundwater for its public water supply. At the time the Fund began its investigation, the nearest public supply well was located approximately 0.3 mile to the northwest of the site. Since then, Hilton Head has stopped using the well for reasons unrelated to the drycleaning site. The city continues to supply public drinking water from other wells located within two miles of the site.

In the early-1990's, an independent environmental assessment conducted on behalf of the property developer found low concentrations of drycleaning solvents in groundwater underlying a portion of the site. Groundwater monitoring wells were installed and monitored at the developer's expense. These wells showed minor levels of contamination.

The Fund's investigation began in July 2002 and was completed in July 2003. Activities included analysis of soil and groundwater samples from 2 DP soil profiles, 18 DP groundwater profiles, 7 monitoring wells previously installed by the developer, and 8 new monitoring wells installed by the Fund. Samples were also collected along the water drainage pathway to determine if nearby ponds were impacted by operations at the site.

In addition to PCE, many of the samples contained the PCE breakdown compounds TCE, DCE, and VC. The surface water samples had detections of PCE, TCE, and DCE that were lower than regulatory levels set for the protection of fishery water bodies. A small groundwater contaminant plume has been delineated at shallow depths ranging between 8 and 20 feet deep. The monitoring wells installed by the Fund show concentrations of PCE (40 ppb), TCE (189 ppb), and VC (3 ppb) above the drinking water standard. The site is awaiting prioritization for initiation of remediation activities.

Sixty Minute Cleaners
635 West Carolina Avenue
Hartsville
Priority #19

Budgets:

Assessment \$ 172,576

Remediation \$ 0

Actual Spent to Date \$ 100,990

Status: **Site Assessment Ongoing**



Sixty Minute Cleaners began operating as Cale's Cleaners in 1968 in a stand-alone building on the western edge of Hartsville. The facility used PCE until 1999, at which time the plant switched to a petroleum-based solvent. Because the area surrounding the plant is predominately residential (with the exception of businesses located along West Carolina Avenue), groundwater contamination is of concern.

Groundwater is used for the public water supply of the city of Hartsville. The nearest public supply well is within 0.5 mile southwest of the drycleaning plant. Two other city wells are located within 2 miles of the plant. Several private wells are located near the drycleaning plant but are only used for irrigation.

The site investigation began on March 3, 2003 and is ongoing. The preliminary data was acquired by DP methods and show that the groundwater contamination plume extends approximately 1,000 feet to the north of the plant and is 550 feet wide with a possible depth of 92 feet. Ten permanent wells have been installed to date, and 5 private wells in the area were sampled to further delineate the plume boundaries. Further assessment is necessary to determine the full extent of contamination.

No petroleum solvent was detected in the soil or groundwater. However, both PCE and TCE are present at the site in soil and groundwater. A soil sample was collected outside the building in close proximity to the location of the old PCE machine. This sample

contained 5,200 ppb PCE at a depth of 16 feet. Also, groundwater contamination was detected outside the building around the old PCE machine. These levels were 310 ppb PCE and 110 ppb TCE, which are above the water quality standards. One of the private irrigation wells contained 37 ppb PCE and 110 ppb TCE.

Since the probable groundwater flow is in the direction of Lake Presswood, the lake was sampled to determine whether it was affected by contamination. At this time, data does not show impact to the lake. Additional fieldwork to determine the vertical and horizontal extent of contamination is scheduled to begin in Fall 2005.



**One Hour Cleanerizing
417 Georgia Avenue
North Augusta
Priority #20**

Budgets:

Assessment \$ **225,776**

Remediation \$ **0**

Actual Spent to Date \$ **109,344**

Status: Site Assessment Ongoing

One Hour Cleanerizing has been used as a drycleaning facility since 1961 and is only known to have used PCE as the drycleaning solvent. The One Hour Cleanerizing plant is in a stand-alone building near the center of the city of North Augusta. The surrounding properties are commercial and residential.

Groundwater contamination with PCE was documented under adjacent properties in 1997 as part of an environmental assessment for municipal redevelopment of the downtown area. North Augusta supplies drinking water to its residents from a surface water intake located upriver of the site. Groundwater is used locally by some small public water systems. Several mobile home parks located approximately 1.5 miles east of the site supply their own water from small public supply wells. There are no known private wells located in the vicinity of the site.

The Fund's investigation began in August 2002. Soil and groundwater contamination have been confirmed through DP sampling and field screening methods. Monitoring wells have been installed and sampled. Fifty-five DP sampling locations (with 34 samples analyzed in the laboratory) were used to define the plume. The highest concentration (19,000 ppb of PCE) was found in a soil sample located in the drive-thru of the drycleaning facility. Also, a PCE concentration of 16,000 ppb was found in the groundwater sample at the same location.

Fifteen surface water samples were analyzed for the presence of drycleaning solvents. PCE was detected in 5 of these samples with the highest concentration of 370 ppb located approximately 1,000 feet from the drycleaner. The concentrations are below the surface water criteria for protection of a fishery, but the detections indicate extensive groundwater contamination.



During the next year, additional bedrock wells will be installed and sampled to conclude the Site Assessment. The photo at left shows a bedrock core recovered from Fund-led investigations conducted on another drycleaning site.

Professional Cleaners
1131 West Greene Street
Cheraw
Priority #21

Budgets:

Assessment \$ 74,853

Remediation \$ 0

Actual Spent to Date \$ 69,290

Status: Site Assessment Complete

Professional Cleaners is a full-service drycleaning facility located at one end of a small shopping center strip mall. The area surrounding the drycleaning plant is a mixture of industrial manufacturing, retail, food service, and residential properties with most of the surrounding population using public water supplied by the city of Cheraw. Several mobile home parks located within two miles of the facility use groundwater for drinking water supply. Although private wells may be located in the vicinity, none are within the contamination zone.

Professional Cleaners used PCE since it began business in 1989. The investigation began in July 2002 and was completed in November 2003. After soil and groundwater samples were analyzed from DP points, 11 monitoring wells were installed. A small groundwater

contamination plume has been delineated and appears to be concentrated directly under the drycleaning plant. The plume covers an area 320 feet by 200 feet, extends downward 20 feet, and contains a maximum PCE concentration of 1,300 ppb.

A Site Assessment Report has been prepared, and completion of an FS is the next step in addressing the contamination at this site.



Monitoring well installation at a drycleaning site.

Dryclean USA #305
425 Johnnie Dodds Blvd
Mount Pleasant
Priority #22

Budgets:

Assessment \$ 258,661

Remediation \$ 0

Actual Spent to Date \$ 258,661

Status: Site Assessment Complete

Dryclean USA #305 is a full-service drycleaner that is located in a stand-alone building along a service road adjacent to US Highway 17. It began operating as a Dryclean USA facility in 1986 and has only used PCE since that time. However, it may have operated prior to 1986 under a different name.

Residential neighborhoods border the commercial and retail strip along both sides of US Highway 17. Groundwater is used locally for public supply by the city of Mount Pleasant. All public wells now used by the city draw water from below a confining unit that prevents downward contamination. A small public supply well drawing water from above the confining unit serves an apartment complex approximately 0.7 mile southwest of the site. Shallow private wells are also located within the vicinity of the site. Most of

the private wells are used for irrigation supply, although at least one nearby private well has been identified as the sole source of drinking water for a residence.

The site investigation began in September 2002. After soil, surface water, and groundwater samples were analyzed, 20 permanent monitoring wells were installed. In addition, samples have been analyzed from 43 private wells in the residential neighborhoods on either side of US Highway 17. The extent of the contamination has been determined.

Soils at the drycleaning plant were found to have significant levels of PCE and two breakdown components, TCE and DCE. The soil contamination is concentrated around a septic tank that was used before sewer lines were extended to this section of Mount Pleasant. The greatest contamination present is approximately 23,000 ppb PCE.

The groundwater near the plant contains 12,000 ppb of PCE, 6,900 ppb of TCE, and 3,100 ppb of DCE. The contamination plume appears to split into two major directions of flow. One component of flow carries the contamination approximately 1,000 feet to the northwest, and the other component flows 1,200 feet to the east covering an area approximately 800 feet wide by 2,200 feet long. The contamination extends down to the confining unit 36 feet below the ground surface.

Five of the 43 private wells have detectable levels of drycleaning solvents but are only used for irrigation supply. One of the irrigation wells contained 5.2 ppb PCE, which is slightly above the drinking water standard. Also, this same well had maximum concentrations of 200 ppb TCE and 1,000 ppb DCE. The northwest component of the groundwater plume approaches, but does not yet reach, a private well used for drinking water. Neither component of the plume threatens the public well used by the apartment complex southwest of the site. Even though natural breakdown of PCE is occurring, the levels of groundwater contaminants are unlikely to meet regulatory levels without an engineered remedial intervention. Therefore, an FS to evaluate remedial options will be completed.

Kawasaki Cleaners
205 North Goose Creek Blvd
Goose Creek
Priority #23

Budgets:

Assessment \$ 154,138

Remediation \$ 0

Actual Spent to Date \$ 154,138

Status: Site Assessment Complete



Kawasaki Cleaners, currently located in a strip mall shopping center, is being used as a dry-drop store but was used at one time as a drycleaning plant. Records indicate that the store used PCE for at least one year (1965-1966). The property surrounding the facility is primarily commercial bordering on residential with most of the nearby population using public water supplied by the city of Goose Creek.

Groundwater is used locally for drinking at a few mobile home parks located within 1 mile of the site. In addition, a day care center within ½ mile uses a private well as its source of drinking water.

The site investigation began in September 2002 and was completed in April 2003. After samples were collected and analyzed from DP groundwater profiles, 13 monitoring wells were installed. A groundwater contamination plume has been delineated that appears to stay under the strip mall property. The plume covers an area approximately 400 feet long by 300 feet wide and extends downward 48 feet.

The plume contains PCE (4,500 ppb) and the breakdown components TCE (400 ppb), DCE (340 ppb), and VC (9 ppb) in excess of their respective drinking water standard limits. The site is awaiting prioritization for remediation.

Superior Cleaners
2910 Abbeville Highway
Anderson
Priority #24

Budgets:

Assessment \$ 131,443

Remediation \$ 0

Actual Spent to Date \$ 131,443

Status: **Site Assessment Complete**



Superior Cleaners is a full-service drycleaner that has been operating since 1962. The facility used PCE but has recently switched to Green Earth© drycleaning solvent. The drycleaning plant is located in a stand-alone building surrounded on two sides by residential properties. Other nearby land uses are commercial and retail properties.

Most of the surrounding population uses public water supplied by the city of Anderson from surface water intakes located a large distance from the drycleaning plant. There is limited use of groundwater near the site. However, one public supply well for a mobile home park is located 1.1 miles west of the drycleaning plant. There may also be private wells within the vicinity of the plant, but none are known within the contamination zone.

The site investigation began in November 2001 and was completed in July 2002. Fund activities have included analysis from 3 DP soil profiles, 13 DP groundwater profiles, and 17 permanent monitoring wells. PCE concentrations of up to 600 ppb have been detected in groundwater. The contamination plume is approximately 250 feet long by 175 feet wide and about 70 feet deep. The contamination is also found in the bedrock.

Soil samples collected around the drycleaning plant found trace levels of PCE, but none were above the action levels established for soil. Liquids and sediments were also collected from the town's sewer system. There does not appear to be any significant spread of drycleaning solvents via this route. There are no nearby surface water bodies that can be affected by the site. The site will continue to be evaluated as it awaits prioritization for remediation.

Hubbard's Cleaners
204 Graham Street
Florence
Priority #26

Budgets:

Assessment \$ **30,736**

Remediation \$ **0**

Actual Spent to Date \$ **30,736**

Status: Site Assessment Ongoing

Hubbard's Cleaners operated as a drycleaner from 1945 to 1993. The site is near the center of the city of Florence in a largely residential area that is transitioning to commercial. The drycleaning plant was in a stand-alone building that has since been converted to a private club/restaurant. Two aboveground storage tanks were used to store PCE inside the building. The tanks have been removed. It is not known whether other drycleaning solvents may have been used.

Groundwater is used locally by Florence for public water. The nearest public city well, approximately ½ mile from the site, is screened below 500 feet deep and is likely protected from contamination by a geologic confining unit. Florence has other wells within two miles of the site that are much shallower. Also, there are numerous mobile home parks in the area using shallow wells that may not be protected by a confining unit.

The site investigation began in August 2002 and continued through March 2003. Soil and groundwater contamination have been documented using DP methods. However, permanent monitoring wells have not been installed. Although the full depth of the plume has not yet been defined because of limitations of the DP apparatus, the contamination extends down to at least 60 feet below the ground surface. Based on the preliminary data, elevated concentrations of PCE (2,000 – 3,000 ppb) have migrated to a number of off-site locations.

The data collected thus far shows the groundwater contamination plume has spread over an area of at least 69 acres (2,000 feet long and approximately 1,500 feet wide).



One Hour Martinizing No. 3
1700 Second Loop Road
Florence
Priority #31

Budgets:

Assessment \$ **92,247**

Remediation \$ **0**

Actual Spent to Date \$ 92,247

Status: Site Assessment Complete

One Hour Martinizing #3 has operated as a full service drycleaner since 1971. The drycleaner is located in a stand-alone building, and PCE is the solvent used in the drycleaning operation. The surrounding properties are mostly commercial bordering on single and multi-family residential housing areas.

The city of Florence uses local groundwater for its public water supply. The nearest public well is approximately ½ mile from the site, and six other wells are operated by the city within two miles of the site. The city wells are screened at depths of greater than 500 feet deep and are likely protected from contamination by a confining unit. Five mobile home parks within two miles of the site use shallow wells that may not be protected by a confining unit.

The Fund's investigation began in May 2003. Eight soil and twenty-five groundwater samples were collected using DP apparatus. Nineteen permanent monitoring wells have also been installed. The groundwater contamination extends down to 42 feet below the ground surface. The groundwater plume covers an area approximately 210 feet wide by 300 feet long. The highest concentration of PCE is 22,000 ppb in a shallow well. Contamination in groundwater appears to be confined to the site and its nearby environs.

Assessment is complete and the Site Assessment Report has been finalized in preparation for completion of an FS.



**Georgetown Cleaners
1230 Church Street
Georgetown
Priority #32**

Budgets:

Assessment \$ 131,419

Remediation \$ 0

Actual Spent to Date \$ 131,419

Status: Site Assessment Ongoing

Georgetown Cleaners operated as a full service drycleaner from 1952 until November 2003 and used PCE as the drycleaning solvent. The facility is located in a stand-alone building along Highway 17 (Business) in Georgetown. While in a predominantly commercial area, the rear of the plant abuts residential property and a small playground.

Most of the surrounding population uses public water supplied by the city of Georgetown from surface water intakes located miles away from the drycleaning plant. The only known use of groundwater near the site is one public supply well located nearly two miles away. Nearby surface water and estuarine wetlands support fishery activities.

The site investigation began in November 2002. Soil and groundwater samples have been collected using DP apparatus. Twenty-three permanent monitoring wells have been installed. Based on the data, PCE and breakdown products contaminate the groundwater over an area of approximately 200 feet long by 160 feet wide. High concentrations of PCE (9,300 ppb) have been found in groundwater near the side entrance to the drycleaner building. High concentrations are also present in the area used for drum storage. The vertical extent of the contamination has been determined to be 40 feet below ground surface.

Well installation is complete and a Site Assessment Report will be prepared.

Dryclean USA - Pineland Station
302-B Pineland Mill
Hilton Head
Priority #36

Budgets:

Assessment \$ 87,473

Remediation \$ 0

Actual Spent to Date \$ 87,473

Status: **Site Assessment Ongoing**

Dryclean USA - Pineland Station is a full-service drycleaner that uses PCE. It has been a drycleaning facility since approximately 1986. The business is located at the end of a strip shopping center. The surrounding area is commercial and retail.

The city of Hilton Head uses groundwater locally for public water supply. The nearest public supply well is approximately 0.4 mile away and draws its water from a depth of less than 200 feet deep. There are no known private wells within the plume area or immediately down gradient of any contamination.

The site investigation began in February 2003 and is ongoing. Soil and groundwater contamination have been documented using DP technology. Seven permanent monitoring wells have been installed and sampled. However, additional monitoring wells are required to delineate the vertical extent of contamination. The existing data show PCE concentrations in groundwater up to 14,000 ppb. The groundwater plume appears to be confined to the area under the shopping center parking lot.

Andrews Cleaners
2 East Main Street
Andrews
Priority #40

Budgets:

Assessment \$ **19,942**

Remediation \$ **0**

Actual Spent to Date \$ **19,942**

Status: **Site Assessment Ongoing**

Andrews Cleaners has operated as a drycleaner since 1984 and is located in a row of buildings near the center of town. The business has used PCE as the drycleaning solvent. Adjacent properties are commercial with residences approximately 200 yards away.

The town of Andrews uses groundwater locally for public water supply. The only public supply well used by the town is approximately 0.5 mile from the drycleaning plant. While this deep well draws its water from below an impermeable geologic confining unit, previous impacts of pesticides in the well show that it is vulnerable to impacts of contamination from the surface. Private wells may be scattered throughout the area and may potentially be used for drinking water. No private wells are known within the plume area or immediately down gradient of any contamination.

The site investigation began in May 2003 and is ongoing. Soil and groundwater samples have been collected using DP apparatus. Permanent monitoring wells have not been installed. Based on the data, PCE contaminates the groundwater over an area approximately 780 feet long by 330 feet wide. High concentrations of PCE (79,000 ppb) have been found in the groundwater near the rear door of the drycleaning building. The vertical extent of the contamination has not yet been defined. The plume dimensions may be revised as more data become available.

Dryclean USA - Pope Avenue
70 Pope Avenue
Hilton Head
Priority #47

Budgets:

Assessment \$ **85,210**

Remediation \$ **11,478**

Actual Spent to Date \$ **85,460**

Status: Site Assessment Complete
Further Monitoring Required

The Dryclean USA - Pope Avenue Site operated as drycleaning plant from 1992 until September 2002. The drycleaner used PCE in a dry-to-dry machine. The drycleaning facility was located at the end of a small strip shopping center anchored by a supermarket. The space occupied by the drycleaning facility is now an ice cream store. The surrounding area is a mixture of commercial, retail and residential areas.

The city of Hilton Head uses groundwater locally for public water supply. At the time the Fund began investigation of the site, the nearest public supply well was located approximately 0.25 mile to the northeast. However, Hilton Head no longer uses this well for reasons unrelated to the drycleaning site. The city continues to supply public drinking water from other wells located within 2 miles of the site.

Site investigations began in February 2003 and were completed in July 2003. Fund-led activities included collecting 11 DP profiles in February 2003. Based on these results, four monitoring wells were installed in July 2003.

Soil samples collected around the drycleaning plant found trace levels of PCE, but none contained contamination above the established action levels. Liquids and sediments were also collected from the town's sewer system. The drycleaning solvent does not appear to have spread significantly via this mechanism. There are no nearby surface water bodies that could be affected by the site.

Initial groundwater sampling found low concentrations of PCE (6 ppb) in the shallow groundwater zone ranging from 5 to 15 feet deep. This concentration is slightly above the drinking water standard (5 ppb). During the next groundwater sampling only VC (3.2 ppb) was detected above its drinking water standard (2 ppb).

A public meeting was conducted in Hilton Head on March 22, 2005 to discuss the various options available for remediation. A ROD was signed on May 16, 2005. The Fund will continue to monitor the groundwater at the site to verify that there is no future increase in contamination levels.

6. SC Drycleaning Restoration Trust Fund Sites, listed by County

This list is arranged by county. For a listing in order of priority, please refer to the website address <http://www.scdhec.gov/lwm/html/dryclean.html>. Inclusion of sites on this list does not make a site Eligible for the Fund. Scores have been assigned to sites regardless of their Fund Eligibility Status.

A priority of * indicates the site has not been ranked or has not met all eligibility requirements.**

County/Drycleaner Name	Address	City	PRIORITY
ABBEVILLE COUNTY			
Abbeville Cleaners, Inc	403 S Main St	Abbeville	140
Fmr. Farmers Cleaners	303 Poplar St	Abbeville	138
AIKEN COUNTY			
Belvedere Cleaners	502 Clearwater Rd	Belvedere	10
Colonial Cleaners, Inc	706 Old Edgefield Rd	N Augusta	***
Fmr. Carlyn Services	217-A Edgefield Rd	N Augusta	171
Fmr. Quick As A Wink Cleaners	153 Pendleton St	Aiken	266
Force Cleaners, Inc	417 Georgia Ave	N Augusta	20
Osbon Laundry & Cleaners	136 Pendleton St SW	Aiken	***
Sundance Cleaners	1416 Whiskey Rd	Aiken	49
Sundance Cleaners	403 H Silver Bluff Rd	Aiken	137
Warneke Cleaners, Inc	113 Newberry St SW	Aiken	***
ANDERSON COUNTY			
Belton One Hour Cleaners	420 S Main St	Belton	16
Deluxe Cleaners	19 Mill St	Williamston	17
Fmr. Modern Cleaners	106 Manning St	Anderson	238
Modern Dry Cleaners, Inc	113 Whitehall Rd	Anderson	63
Modern Dry Cleaners, Inc	3307 Cinema Ave	Anderson	76
Professional Cleaners	1504 E Greenville St	Anderson	197
Riggins Garment Care, Inc	215 E Main St	Williamston	242
Riggins Garment Care Inc	1903 N Main St	Anderson	290
Soft Touch Cleaners, Inc	2130 E Greenville St	Anderson	***
Superior Cleaners	2910 Abbeville Hwy	Anderson	24
Superior Dry Cleaners	301 E Benson St	Anderson	220
BAMBERG COUNTY			
Colonial Cleaners	197 Magnolia Street	Denmark	1
Fmr. Superior Cleaners/Singleton Printing	322 S Main St	Bamberg	14
Fmr. Thompson Cleaners/Superior Cleaners	47 Bell St	Bamberg	5
Superior Cleaners	2293 Main Hwy	Bamberg	83
BARNWELL COUNTY			
Color Craft Cleaners	9008 Marlboro Ave	Barnwell	11
Edwards Professional Cleaners	4444 Rosemary St	Williston	7
The Pressing Club	1619 Allen St	Barnwell	***
BEAUFORT COUNTY			
Dryclean USA Coastal #311	136 A Sea Island Pkwy	Ladys Island	28
Dryclean USA Coastal, Inc	302 B Pineland Mill	Hilton Head	36
Dryclean USA Coastal, Inc	70 Pope Ave	Hilton Head	47
Dryclean USA Coastal, Inc	16 Palmetto Bay Rd	Hilton Head	52
Dryclean USA Coastal, Inc	7 Robert Smalls Pkwy, Ste 5	Beaufort	91
Fmr. Advance Cleaners	Fountain Center, 55 New Orleans Rd	Hilton Head	18
Fmr. Dryclean USA (Marketplace)	11 Palmetto Bay Rd, Market Place Center	Hilton Head	3
Fmr. Dryclean USA Coastal, Inc	Coligny Plaza, 7 Pope Ave	Hilton Head	92
Fmr. Dryclean USA Coastal, Inc	1349 Ribault Rd	Port Royal	112
Tucker Dry Cleaners, Inc	1905 Boundary St	Beaufort	240

BERKELEY COUNTY			
Dryclean USA Coastal, Inc	211 St James Ave	Goose Creek	232
Fmr. One Hour Martinizing - Citi Financial	104 South Highway 52	Moncks Corner	***
Gethers Cleaners	206 N Hwy 52	Moncks Corner	29
Kawasaki Cleaners	B-9 Goose Creek Blvd, Berkeley Sq Shop Ctr	Goose Creek	23
Kawasaki Dry Cleaners	625 Red Bank Rd	Goose Creek	48
One Hour Martinizing	221 N Hwy 52	Moncks Corner	***
Plantation Cleaners	1316 Red Bank Rd, Suite #1	Goose Creek	97
Yeamans Hall Drycleaning	1306 Yeamans Hall Rd	Hanahan	256
CALHOUN COUNTY			
City Dry Cleaners	1505 W Bridge St	Saint Matthews	***
CHARLESTON COUNTY			
Centerville Cleaners	852 Folly Rd	James Island	75
Charleston Dry Cleaners and Laundry	525 E Bay St	Charleston	88
Classic Cleaners of Charleston	2665 Ashley Phosphate Rd	N Charleston	301
Diamond Cleaners	1947 Maybank Hwy	Charleston	218
Dryclean USA Coastal, Inc	425 Johnnie Dodds Blvd	Mount Pleasant	22
Dryclean USA Coastal, Inc	230 Mathis Ferry Rd	Mount Pleasant	103
Dryclean USA Coastal, Inc	96 Wentworth St	Charleston	109
Dryclean USA Coastal, Inc	1518 Hwy 17 N	Mount Pleasant	125
Dryclean USA Coastal, Inc	1643 B Savannah Hwy	Charleston	225
East Bay Cleaners	480 E Bay St	Charleston	265
Fmr. Barrineau's 1 Hr Martinizing	730 Rutledge Ave	Charleston	***
Fmr. Chris' Drycleaning	761 Coleman Blvd	Mount Pleasant	***
Fmr. D&B One Hour Martinizing, Inc	14 Carriage Ln	Charleston	176
Fmr. Dryclean USA	520 Folly Rd	Charleston	213
Fmr. Dryclean USA Coastal, Inc	811 Coleman Blvd	Mount Pleasant	56
Fmr. Dryclean USA Coastal, Inc	410 Coleman Blvd	Mount Pleasant	26
Fmr. Dryclean USA Coastal, Inc	65 Windermere Blvd	Charleston	201
Fmr. Dryclean USA Coastal, Inc	316 East Bay St	Charleston	241
Fmr. Dryclean USA Coastal, Inc	5634 Rivers Ave	N Charleston	247
Fmr. Dryclean USA Coastal, Inc	3328 Rivers Ave	Charleston	279
Fmr. Dryclean USA Coastal, Inc	509 A Hwy 176	Goose Creek	***
Fmr. One Hour Valet	1235 Savannah Hwy	Charleston	211
James Island Cleaners	1739 Maybank Hwy	Charleston	188
Kim's Cleaners	3655 Rivers Avenue	N Charleston	***
King's Valet Cleaners	1970 Ashley River Rd	Charleston	215
Old Towne Cleaners, Inc #3	5405 Dorchester Rd	N Charleston	***
Old Towne Cleaners, Inc #4	2140 Savannah Hwy	Charleston	***
One Hour Valet	8510 A Rivers Ave	N Charleston	231
Pelican Cleaners	1521 Palm Blvd	Isle of Palms	122
Pressing Club Cleaners	1664 Hwy 171 Unit A	Charleston	128
Smith Family Cleaners	1015 Harborview Rd	Charleston	141
Smith Family Cleaners	336 Folly Rd	Charleston	174
Swinton Dry Cleaners & Laundry	106 Spring St	Charleston	***
Tip Top Cleaners	4727 Mixon Ave	N Charleston	228
Tip Top Cleaners	5647 Rivers Ave	N Charleston	244
CHEROKEE COUNTY			
Blanton's Cleaners	403 Elm St	Gaffney	95
CHESTERFIELD COUNTY			
Chesterfield Cleaners	165 W Main St	Chesterfield	***
Pageland Cleaners	122 N Maple St	Pageland	***
Professional Cleaners	1131 W Greene St	Cheraw	21

COLLETON COUNTY			
Anderson's One Hour Cleaners	197 Ireland Creek Dr	Walterboro	2
Sentry Cleaners of Walterboro	215 Robertson Blvd	Walterboro	38
DARLINGTON COUNTY			
60 Minute Cleaners	635 W Carolina Ave	Hartsville	19
One Hour Martinizing	409 Pearl St	Darlington	8
DORCHESTER COUNTY			
Davis Dry Cleaners	10050 Dorchester Rd	Summerville	54
Davis Dry Cleaning	604 Bacons Bridge Rd	Summerville	27
Davis Modernize of Summerville	523 N Main St	Summerville	129
Davis Modernize of Summerville	100 Miles Rd	Summerville	268
Dryclean USA Coastal, Inc	9998 A Dorchester Rd	Summerville	70
Dukes Dry Cleaners	5678 Memorial Blvd	Saint George	50
Knightsville Dry Cleaners	1580 Central Ave	Summerville	9
Lenz Dry Cleaners and Laundry	1625 N Main St, Suite 101	Summerville	73
Lenz Dry Cleaning & Laundry	5101 Ashley Phosphate Rd, Suite 100	N Charleston	196
FAIRFIELD COUNTY			
Becknell Cleaners	201 N Congress St	Winnsboro	15
Carolina Cleaners, Inc	223 S Congress St	Winnsboro	139
FLORENCE COUNTY			
Custom Cleaners	1619 W Palmetto St	Florence	146
Florence Steam Laundry	374 W Darlington St	Florence	61
Florence Steam Laundry	1933 W Palmetto St	Florence	132
Fmr. Hubbard's Cleaners	204 Graham St	Florence	25
Fmr. One Hour Martinizing	1105 E Palmetto St	Florence	***
Fmr. White Swan Laundry, Inc	324 W Evans St	Florence	117
K & M Dry Cleaners	510 2nd Loop Rd	Florence	32
One Hour Martinizing No 1	832 S Irby St	Florence	35
One Hour Martinizing No 2	1701 W Palmetto St	Florence	120
One Hour Martinizing No 3	1700 2nd Loop Rd	Florence	30
Sunshine Dry Cleaners	1210 S Cashua Dr	Florence	***
Superior Cleaners & Laundry	124 Dansing Street	Lake City	***
The Cleanery	2241 W Palmetto St	Florence	34
West Gate Cleaners	2131 Hoffmeyer Rd	Florence	78
White Swan Dry Cleaners	223 Cherokee Rd	Florence	44
White Swan Dry Cleaners	310 N Irby St	Florence	108
GEORGETOWN COUNTY			
Andrews Cleaners	2 E Main St	Andrews	39
C & L Cleaners, Inc	1243 N Fraser St	Georgetown	***
Curry's Professional Dry Cleaners	1506 Highmarket St	Georgetown	4
Fmr. Georgetown Laundry, Inc	1109 N Fraser	Georgetown	204
Georgetown Laundry, Inc	1230 Church St	Georgetown	31
Island Cleaners	Hwy 17 S	Pawleys Island	111
Landys Cleaners, Inc	119 N Fraser St	Georgetown	80
GREENVILLE COUNTY			
Allen's University Cleaners	5000 Old Buncombe Rd, Suite 10	Greenville	***
B & C Cleaners	201 Wade Hampton Blvd	Greenville	***
Bell Laundry & Cleaners	1414 E Washington St	Greenville	164
Brashier Polk Cleaners, Inc	21 Orchard Park Dr	Greenville	37
Brashier Polk Cleaners, Inc	1170 A Woodruff Rd	Greenville	64
Brashier Polk Cleaners, Inc	201 A W Butler Ave	Mauldin	82
Budget Cleaners	496 South Pleasantburg	Greenville	149
Carpenter Cleaners	115 E College St	Simpsonville	133
Church Street Kleaners	860 S Church St	Greenville	162
Crescent Cleaners	717 E Stone Ave	Greenville	181

Crossroads Cleaners	1255 Rutherford Rd	Greenville	81
Dryclean USA of South Carolina	3402 W Blue Ridge Dr	Greenville	144
Fabricare of Greenville	405 The Pkwy Ste 600	Greer	***
Fmr. Brashier Cleaners	25 College St	Greenville	191
Fmr. Dryclean USA	3245 Wade Hampton Blvd	Taylors	57
Fmr. Dryclean USA of SC, Inc	114-A W Butler St/Whatley Sqr	Mauldin	55
Fmr. Dryclean USA of SC, Inc	5 Legrand Blvd	Greenville	106
Fmr. Dryclean USA of SC, Inc	1430 Pelham Rd	Greenville	107
Fmr. Dryclean USA of SC, Inc	2402 Laurens Rd	Greenville	229
Fmr. Dryclean USA of SC, Inc	3601 E North St	Greenville	248
Fmr. Gregory's Laundry & Cleaners, Inc	812 Laurens Rd	Greenville	96
Fmr. Lafayette Scientific Cleaners	300 Mills Ave	Greenville	226
Fmr. Leawood Cleaners/Laundry	3110 Wade Hampton Blvd	Greenville	***
Fmr. Leawood Cleaners/Laundry	1602 Poinsett Hwy	Greenville	***
Fmr. Leawood Cleaners/Laundry	2427 Old Buncombe Rd	Greenville	***
Fmr. Leawood Cleaners/Laundry	1223 Poinsett Hwy	Greenville	***
Fmr. Mayhew Laboratories, Inc	231 Augusta St	Greenville	208
Fmr. Phenix Supply Company Warehouse	417 Westfield Street	Greenville	***
Fmr. Prestige Cleaners 416	299 S Pleasantburg Ave	Greenville	71
Fmr. Quick As A Wink # 413	2616 Old Anderson Rd	Greenville	69
Fmr. Sunshine Cleaners	1704 B Laurens Rd	Greenville	127
Fmr. Dryclean USA of SC, Inc	810 Pendleton St	Greenville	269
Gault's Cleaners	200 Jones St	Fountain Inn	***
Gregory's Laundry & Cleaners	2017 Augusta Rd	Greenville	153
Hillcrest Cleaners	689 SE Main St	Simpsonville	207
J & A Laundry Service	633 N Main St	Simpsonville	90
J & A Laundry Service, Inc	3021 Augusta St	Greenville	40
L & K Dry Cleaners	401 N Main St	Mauldin	42
Lafayette Scientific Cleaners	1707 Augusta Rd	Greenville	66
Lake Forest Cleaners	1316 N Pleasantburg Dr	Greenville	41
Lane's Cleaners	2131 Woodruff Rd	Greenville	***
Leawood Cleaners & Laundry	1521 N Pleasantburg Dr	Greenville	58
Master's Mark Dry Cleaners	1604 Woodruff Rd	Greenville	118
Master's Mark Dry Cleaners	2135 Old Spartanburg Rd	Greer	145
Master's Mark Dry Cleaners	1701 Poinsett Hwy	Greenville	186
Mayhew Laboratories, Inc	7 Bradshaw St	Greenville	192
Monarch Cleaners	1312 Stallings Rd	Greenville	195
Monarch Cleaners	2801 Wade Hampton Blvd, Ste 118	Taylors	***
Overbrook Laundry and Cleaners, Inc	1505 E North St	Greenville	85
Polk - Milliken Cleaners, Inc	2702 E North St	Greenville	198
Powdersville Cleaners, Inc	3504 Hwy 153	Greenville	205
Prestige Cleaners 415	2100 Augusta Rd	Greenville	300
Prestige Cleaners 417	510 Rutherford St	Greenville	130
Quick As A Wink 401	2500 Wade Hampton Blvd	Greenville	182
Quick As A Wink 402	510 Haywood Rd	Greenville	100
Quick As A Wink 403	101 S Buncombe St	Greer	116
Quick As A Wink 404	14 Roper Mountain Rd	Greenville	94
Quick As A Wink 407	3566 Pelham Rd	Greenville	51
Quick As A Wink 411	1906 Augusta Rd	Greenville	126
Quick As A Wink 412	1118 N Pleasantburg Dr	Greenville	45
Sunshine Cleaners & Laundry	1800 Laurens Rd	Greenville	154
Th' Cleaners America's Finest	1536 Laurens Rd	Greenville	193
U.S. 1.99 Cleaners/McCleaners	3715 E North St, Suite N	Greenville	74

GREENWOOD COUNTY			
B & L Cleaners, Inc	705 S Main St	Greenwood	110
Fmr. Greenwood One Hour Cleaners	105 Main St (@ Seaboard)	Greenwood	169
Fmr. Greenwood One Hour Cleaners	Greenwood Plaza (Ellison St @ Montague)	Greenwood	199
Fmr. Greenwood One Hour Cleaners 1	118 East Court Street	Greenwood	235
Fmr. Greenwood One Hour Cleaners 2	916 Montague St	Greenwood	243
HAMPTON COUNTY			
Estill Dry Cleaners	66 Clark Ave	Estill	***
Phillip Dry Cleaners	288 Railroad Avenue	Estill	65
HORRY COUNTY			
Conway Cleaners	1510 Third Ave	Conway	189
Dryclean USA Coastal, Inc	2302-A Kings Hwy N	Myrtle Beach	302
Fmr. Dryclean USA Coastal, Inc	801 South Kings Hwy	Myrtle Beach	260
Fmr. Conway Cleaners, Inc	209 Beaty St	Conway	221
Georgetown Laundry	17 Bypass @ Int. Of 707	Myrtle Beach	178
Howard's Dry Cleaners	3401 N Kings Hwy Ste B	Myrtle Beach	271
Little River Cleaners, Inc	1670-D Harbour Square, Hwy 17	Little River	33
National Linen	725 Broadway	Myrtle Beach	264
Ocean Cleaners	3326 Hwy 17 S	N Myrtle Beach	124
Regal Cleaners	5401 Hwy 544 Brave Village	Socastee	179
Royal Cleaners - South	612 Broadway	Myrtle Beach	114
Salley Cleaners, Inc	1510 N Main St	Conway	180
Sand Dollar Cleaners	2138 Hwy 17	Garden City	***
Sunny Cleaners	9674 N Kings Hwy	Myrtle Beach	233
Sunshine Cleaners	202 Hwy 17 N	N Myrtle Beach	157
Surfside Cleaners, Inc	822 Surfside Dr	Surfside Beach	155
KERSHAW COUNTY			
Hazelwood Cleaners #1	529 E Dekalb St	Camden	***
Hazelwood Cleaners #3	828 Hwy 601 S	Lugoff	***
LANCASTER COUNTY			
Davis Dry Cleaners	120 W Gay St	Lancaster	216
Fmr. Dryclean USA of SC, Inc	500 W Meeting St	Lancaster	***
Neat N Clean Dry Cleaners Inc	1317 W Hwy 9 Bypass	Lancaster	168
Quick As A Wink 464	330 S Main St	Lancaster	236
LAURENS COUNTY			
Fmr. Sunshine Cleaners & Laundry	102 W Florida St	Clinton	***
Master Dry Cleaners & Laundry	213 E Main St	Laurens	***
Stephens Cleaners & Laundry	103 Sullivan St	Laurens	187
Stephens Self Serve	554 N Harper St	Laurens	156
LEE COUNTY			
Quality Cleaners	507 S Main St	Bishopville	***
LEXINGTON COUNTY			
Becknell's Westside Cleaners	607 Meeting St	West Columbia	203
Bryans Cleaners 480	1243 Lake Murray Blvd	Irmo	89
Burnette's Cleaners, Inc No 2	2250 Sunset Blvd	West Columbia	165
Carolina Drycleaners	441 Sunset Blvd, Capitol Square	West Columbia	***
Dutch Cleaners, Inc	533 St Andrews Rd	Columbia	217
Eagle Cleaners	6801 St Andrews Rd	Columbia	115
Fmr. Kleen Kare Cleaners	2223 Augusta Rd	West Columbia	***
Fmr. One Hour Martinizing	1621 Airport Blvd	West Columbia	177
Fmr. US \$1.75 Cleaners	6169 St Andrews Rd	Columbia	202
Kleen Kare Cleaners	6179 St Andrews Rd	Columbia	173

Lexington Dry Cleaning	510 Columbia Ave	Lexington	105
Lexington Dry Cleaning	425 W Main St	Lexington	93
Lexington Dry Cleaning	7333 St Andrews Rd	Irmo	143
Lexington Dry Cleaning	5504 Sunset Blvd	Lexington	184
One Hour Kleen Kare	519 N Lake Dr	Lexington	160
One Hour Kleen Kare	919 Knox Abbott Dr	Cayce	170
One Hour Martinizing Dry Cleaning	742 St Andrews Rd	Columbia	183
Shealy's Cleaners	154 Fulmer St	Batesburg	***
Skip's One Hour Cleaner	1312 Sunset Blvd	West Columbia	151
Tripp's Fine Cleaners	6020 St Andrews Rd	Columbia	119
MARION COUNTY			
Dixie Laundry & Dry Cleaning	164 E Front St	Mullins	53
Fmr. Joye Cleaners	Gapway St @ Highway 76	Mullins	***
Joye Dry Cleaning	801A S Main St	Mullins	43
Joye One Hour Cleaners	1017 Godbold Ave @ Jones St	Marion	12
Main Street Cleaners, Inc	208 N Main St	Marion	13
Quality Cleaners & Alterations of Mullins	316 S Main St	Mullins	***
NEWBERRY COUNTY			
Country Clean of Newberry	1322 College St	Newberry	46
Country Clean of Newberry, Inc	1220 Wilson Rd	Newberry	99
Prosperity Dry Cleaners	126 Grace St	Prosperity	6
OCONEE COUNTY			
Keowee Kleaners, Inc	508 Bypass 123	Seneca	185
Quality VIP Drycleaners & Laundry	Hwy 28, West Plaza Shopping Center	West Union	148
Service Cleaners	120 Windsor St	Westminster	210
Tri City Cleaners & Laundry, Inc	515 E North 1st St	Seneca	152
ORANGEBURG COUNTY			
Fmr. One Hour Martinizing #2	1195 St Matthews Rd	Orangetburg	245
Fmr. Rhoad's Cleaners	491 Riverside Dr	Orangetburg	253
Fmr. Rhoad's Cleaners, Inc	1555 Russel St	Orangetburg	113
Kirkland Cleaners	1193 Henley St	Orangetburg	142
L & S Coin Laundromat, Inc	2004 Columbia Rd	Orangetburg	222
One Hour Martinizing #2	1395 St Matthews Rd	Orangetburg	254
Rhoads Cleaners	360 Riverside Dr	Orangetburg	246
Rhoads Cleaners, Inc	1650 Russell St	Orangetburg	298
Weathers Cleaners	212 Whittaker Pkwy	Orangetburg	***
PICKENS COUNTY			
Alexander Cleaners	210 E Main	Easley	131
Easley One Hour Cleaners, Inc	139 Anderson Hwy Suite 260	Clemson	190
Fmr. Dryclean USA of SC, Inc	5546 By Pass 123	Easley	134
Fmr. Easley One Hour Cleaners	139 Anderson Hwy, Suite 250	Clemson	***
One Hour Martinizing	6101 Calhoun Mem Hwy Suite N	Easley	230
Palmetto Cleaners	919A Anderson Dr	Liberty	121
RICHLAND COUNTY			
\$2.50 Cleaners	4558 C Forest Dr	Columbia	***
Arnold's Cleaners	1601 Leesburg Rd	Columbia	250
Arnold's Professional Cleaners	2601 Main St	Columbia	273
Arnold's Professional Garment Care, Inc	101 Sunbelt Blvd	Columbia	98
Arnold's Professional Garment Care, Inc	3104 Broad River Rd	Columbia	158
Arnold's Professional Garment Care, Inc	2601 Rosewood Dr	Columbia	297
Bryans Cleaners 487	9380 Two Notch Rd	Columbia	68

Burnette's Cleaners, Inc	5213 Trenholm Rd	Columbia	104
Burnette's Cleaners, Inc	623 Beltline Blvd	Columbia	135
Burnette's Cleaners, Inc	10120 Two Notch Rd	Columbia	166
Burnette's Cleaners, Inc	7045 Parklane Rd	Columbia	175
Burnette's Cleaners, Inc No 3	1718 Broad River Rd	Columbia	206
Burnette's One Hour Cleaners	6320 Garners Ferry Rd	Columbia	172
Classic Cleaners	2900 Leesburg Rd Ste A	Columbia	***
Colonial Cleaners	9765 Two Notch Rd	Columbia	102
Deluxe Cleaners	3007 Broad River Rd	Columbia	223
Ed Robinson Cleaners	3023 Millwood Avenue	Columbia	259
Ed Robinson Laundry & Dry Cleaning, Inc	2551 Forest Drive	Columbia	258
Elsnohb Trading Company	205 Q Columbia Ave	Columbia	***
Environmental Sorbent Products	801 Brookwood Dr	Columbia	***
Fmr. Burnette's Cleaners	7400 Two Notch (Approx. location)	Columbia	194
Fmr. Cedar Chest Cleaners	3315 Broad River Rd, Suite 110	Columbia	***
Fmr. Ed Robinson Laundry & Dry Cleaning	Dutch Square Mall, Near A&P Store	Columbia	159
Fmr. Ed Robinson Laundry & Dry Cleaning	1000 Block Gervais Street	Columbia	274
Fmr. Ed Robinson Laundry & Dry Cleaning	2231 Main Street	Columbia	275
Fmr. Lexington Drycleaning	3504 River Dr	Columbia	150
Fmr. Patrone's Cleaners	633 Main St	Columbia	***
Fmr. Richard's Carriage Cleaners	2601 Two Notch Rd	Columbia	***
Fmr. Rosenblum Cleaners, Inc	5319 Forest Dr	Columbia	239
Fmr. Splash Laundromat	9221-15 Two Notch Rd	Columbia	84
Fmr. Sunshine Laundry and Cleaners	601 Main St	Columbia	***
Fmr. Sunshine Laundry and Cleaners	1500 Woodrow St	Columbia	***
Kleen Kare Cleaners	4011 N Main St	Columbia	***
Lexington Dry Cleaners	2336 Decker Blvd	Columbia	212
Lexington Dry Cleaning	7228 Parklane Rd	Columbia	163
Lexington Dry Cleaning	6041 Garners Ferry	Columbia	272
Master Cleaners, Inc	1908 Blossom St	Columbia	86
Master Cleaners, Inc	1907 Blossom St	Columbia	299
Michael's Enterprises of Columbia Inc	1749 Decker Blvd	Columbia	101
Royal Cleaners	1637 Main St	Columbia	***
Schoony's Dry Cleaners	3010 Rosewood Dr	Columbia	281
Sunshine Cleaners and Laundry	425 Assembly St	Columbia	267
Tripp's Fine Cleaners	1339 Broad River Rd	Columbia	200
Tripp's Fine Cleaners	830 Harden St	Columbia	209
Tripp's Fine Cleaners	3301 Forest Dr	Columbia	249
U.S \$1.75 Cleaners	7358-A Two Notch Road	Columbia	***
Zip Kleen, Inc	1320 Main St	Columbia	***
SALUDA COUNTY			
Fmr. Henrys Cleaners & Self Service	102 S Jefferson St	Saluda	67
SPARTANBURG COUNTY			
B & B Cleaners	219 S Alabama Ave	Chesnee	295
Bell Laundry & Cleaners	448 Marion Ave	Spartanburg	288
Camelot Cleaners	1600 John B White Blvd	Spartanburg	284
Custom Cleaners	184 N Dean St	Spartanburg	292
Dryclean USA of SC, Inc	138 Fernwood Dr	Spartanburg	282

Fmr. City Cleaners	229 W Main St	Spartanburg	***
Fmr. Converse Cleaners	1200 E Main St, Suite 5	Spartanburg	234
Fmr. Dryclean USA of SC, Inc	1011 Union St	Spartanburg	79
Fmr. Dryclean USA of SC, Inc	1000 N Pine St/Pinewood Shop Ctr	Spartanburg	278
Fmr. Dryclean USA of SC, Inc	517 W Main St	Spartanburg	286
Fmr. Dryclean USA of SC, Inc	307 S Church St	Spartanburg	287
Fmr. Dryclean USA of SC, Inc	346 E Main St	Spartanburg	296
Fmr. Fowler Brothers Cleaners	8006 Greenville Hwy	Spartanburg	59
Fmr. Thomas & Sons, Inc	478 Union St	Spartanburg	167
Fmr. Tom & Steve Dry Cleaners	308 S Main St	Woodruff	***
Fmr. Dryclean USA of SC, Inc	Broadwalk Plaza	Spartanburg	***
Fowler Brothers Cleaner & Laundry	3281 Reidville Rd	Spartanburg	***
Fowler Cleaners	625 S Church St	Spartanburg	257
Hayes Cleaners	201 S Alabama Ave	Chesnee	294
Inman Laundry and Cleaners	4 Blackwell St	Inman	77
Master's Mark Dry Cleaners	1949 E Main St	Spartanburg	252
Master's Mark Dry Cleaners	2799 Reidville Rd	Spartanburg	255
Mike's Cleaners	3079 Boiling Springs Rd	Boiling Springs	276
New Method Cleaners	520 N Liberty St	Spartanburg	285
One Hour Martinizing #435	115 E Blackstock Rd	Spartanburg	291
One Hour Martinizing #438	1065 Fernwood Rd	Spartanburg	219
The Piedmont Group	130 Venture Blvd	Spartanburg	***
Quick As A Wink 432	975 Beaumont Ave	Spartanburg	293
Quick As A Wink 434	2415 Reidville Rd	Spartanburg	262
Quick As A Wink 436	1325 Union St	Spartanburg	227
Quick As A Wink 437	1621 Asheville Hwy	Spartanburg	224
Quick As A Wink 463	201 N Granard St	Gaffney	251
Quick As A Wink 431	243 Reidville Rd	Spartanburg	237
Thomas & Sons, Inc	276 S Church St	Spartanburg	289
Yaggle Cleaners, Inc	1752 E Main St	Spartanburg	277
SUMTER COUNTY			
Plaza Cleaners	456 Guignard Dr	Sumter	123
Polar Bear Cleaners, Inc	1087 Alice Drive	Sumter	***
Sumter Laundry & Cleaners, Inc	230 N Lafayette	Sumter	62
Sumter Laundry & Cleaners, Inc	370 Miller Rd	Sumter	***
Tom and Mary's Put and Take Cleaners	1784 Peach Orchard Rd/Hwy 441	Sumter	87
UNION COUNTY			
Modern Cleaners	222 N Pinckney St	Union	136
Sunshine Dry Cleaners, Inc	625 S Pinckney St	Union	***
YORK COUNTY			
Campbell's Cleaners	112 Academy St	Fort Mill	72
Crown Cleaners	725-178 Cherry Rd	Rock Hill	263
Fmr. Dryclean USA of SC, Inc	529 Cherry Rd	Rock Hill	261
Grayson Dry Cleaners	205 S Main St	Clover	***
Norgetown Cleaners, Inc	2036 Cherry Rd	Rock Hill	280
One Hour Martinizing	1045 Camden Ave	Rock Hill	270
Quick As A Wink 461	423 Saluda St	Rock Hill	283
Quick As A Wink 462	2103 Cherry Rd	Rock Hill	214
S&S Classic Cleaners	2562 W Main St	Rock Hill	***
Sawyers Dry Cleaning & Laundry	325 S Cherry Rd	Rock Hill	60
Sixty Minute Cleaners	1160 Cherry Rd	Rock Hill	161
Stanton Cleaning, Inc	126 S Main St	Clover	147
Sun Cleaners	100 Fort Mill Square	Fort Mill	***

A priority of *** indicates the site has not been ranked or has not met all eligibility requirements.

7. List of Acronyms

Act	South Carolina Drycleaning Restoration Trust Fund Act of 2004
DCE	Dichloroethylene
DHEC	South Carolina Department of Health and Environmental Control
DOR	South Carolina Department of Revenue
DP	Direct-Push
FS	Feasibility Study
Fund	South Carolina Drycleaning Restoration Trust Fund
FY	Fiscal Year
MW	Monitoring Well
PCE	Perchloroethylene (tetrachloroethylene), or “perc”
ppb	parts per billion
ROD	Record of Decision
TCE	Trichloroethylene
UST	Underground Storage Tank
VC	Vinyl Chloride

8. List of Certified Environmental Contractors (Current 11/28/05)

Southeastern Environmental
323 Main Street
Conway, SC 29526
(843) 248-3533
Contact: Bruce Newell
DC5117, exp. 11/1/07

Bunnell-Lammons Engineering, Inc.
6604 Ponders Ct
Greenville, SC 29615
(864) 288-1265
Contact: Thomas L. Lammons
DC5090, exp. 2/8/07

HSA Engineers & Scientists
23 B Sheridan Park Circle
Bluffton, SC 29910
(843) 815-5120
Contact: Robert C. Young
DC5074, exp. 2/8/07

ATC Associates, Inc.
400 Northeast Dr, Suite Q
Columbia, SC 29203
(803) 735-0003
Contact: Frederick Lyke
DC5131, exp. 2/28/07

CBM Environmental Services, Inc.
3440 Lakemont Blvd.
Fort Mill, SC 29708
(803) 548-5989
Contact: Kurt Blevins
DC5054, exp. 2/28/07

Duncan Environmental Assoc., Inc.
10817-C Two Notch Rd
Elgin, SC 29045
(803) 788-4333
Contact: Jan Reynolds
DC5132, exp. 2/28/07

Emerald, Inc.
P.O. Box 3050
Sumter, SC 29151
(803) 773-5454
Contact: Ronny L. Lowder
DC5101, exp. 2/28/07

Environmental Resources Management
498 Wando Park Blvd., Suite 100
Mt. Pleasant, SC 29464
(843) 856-4270
Contact: Todd Moody
DC5126, exp. 2/28/07

Fletcher Group
148 River St, Suite 220
Greenville, SC 29601
(864) 421-9999
Contact: Kathy Webb
DC5079, exp. 2/28/07

Force & Associates, Inc.
147 Vera Road, Suite F
Lexington, SC 29072
(803) 359-3200
Contact: Greg Force
DC5099, exp. 2/28/07

Gage Group, Inc.
521 Clemson Road
Columbia, SC 29229
(803) 741-9000
Contact: Chuck Clymer
DC5125, exp. 2/28/07

Groundwater & Environmental Serv., Inc.
121 Centrum Dr, Suite 2
Irmo, SC 29063
(803) 749-4080
Contact: Richard Gillespie
DC5130, exp. 2/28/07

HRP Associates, Inc.
7001-J Pelham Road
Greenville, SC 29615
(864) 289-0311
Contact: Tad Goetcheus
DC5087, exp. 2/28/07

J. Dunaway & Company, Inc.
3035-1 McNaughton Dr.
Columbia, SC 292203
(803) 736-3800
Contact: Brad Hubbard
DC5127, exp. 2/28/07

Mid-Atlantic Associates, Inc.
P.O. Box 669004
Charlotte, NC 28266
(704) 398-9112
Contact: John Reuscher
DC5114, exp. 2/28/07

Rogers & Callcott Engineers, Inc.
P.O. Box 5655
Greenville, SC 29606
(864) 232-1556
Contact: George Y. Maalouf
DC5072, exp. 2/28/07

Schnabel Engineering South, LLC
104 Corporate Blvd. Suite 420
West Columbia, SC 29169
(803) 796-6240
Contact: Raymond L. Knox
DC5129, exp. 2/28/07

WESI Consulting Company
2411 Oak Street, Suite 108
Myrtle Beach, SC 29577
(843) 448-2009
Contact: Tim Mettlen
DC5128, exp. 2/28/07

S&ME, Inc.
155 Tradd St
Spartanburg, SC 29301
(864) 574-2360
Contact: Stanford Lummus
DC5078, exp. 8/22/07

General Engineering & Environmental, LLC
PO Box 30712, 2040 Savage Rd
Charleston, SC 29417
(843) 769-7378
Contact: Sam Jones
DC5070, exp. 10/7/07

Ecology and Environment, Inc.
1950 Commonwealth Lane
Tallahassee, FL 32303
(850) 574-1400
Contact: Perry Kelso
DC5102, exp. 10/11/07

ARM Environmental Services, Inc.
PO Box 50285
Columbia, SC 29250
(803) 783-3314
Contact: Andrew Wilson
DC5081, exp. 10/12/07

Excalibur Environmental Services, Inc.
403 Cotton Hall Ct
Simpsonville, SC 29680
(864) 967-9744
Contact: Brad Morris
DC5094, exp. 11/9/07